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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

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A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

PROFESSOR G. F. STOUT,

WITH THE CO-OPERATION OF DR. E. CAIRD, PROFESSOR WARD, PROFESSOR PRINGLE-PATTISON, PROFESSOR E. B. TITCHENER, AND OTHER MEMBERS OF AN ADVISORY COMMITTEE.

NEW SERIES.

VOL. XIV.—1905.

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THOMAS NELSON AND SONS LTD. EDINBURGH
KRAUS REPRINT LTD.
Vaduz
1964

Printed in Germany
Lessing-Druckerei Wiesbaden

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[1] The heading on page 148 has (by mistake) A. F. Bradley.

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I.—'ABSOLUTE' AND 'RELATIVE' TRUTH.

By Harold H. Joachim.

§ 1. The view, which I wish to attack, may be put roughly as follows: Every judgment is either true or false, and what is true is true always and absolutely and completely. What is true is *eo ipso* "absolutely" true. "Relative truth" is a contradiction in terms, and "absolute" is an otiose addition to "truth". There may be truth about the Relative—all truth, indeed, is about Relations—but the truth about the Relative is itself absolute, *i.e.* true neither more nor less. A "partial truth" is a judgment which contains complete and absolute truth, but which, as compared with another judgment, covers with its truth part only of the subject-matter of the latter. The same "partial truth," looked at from the point of view of the larger judgment and wrongly taken as equivalent to it, is an "error". Hence a "partial truth" is the same thing as a true, but indeterminate, judgment. The determinate judgment is the whole truth about a matter where the indeterminate judgment affirms only part of the truth. But the part affirmed is true absolutely and completely, and remains true to all eternity: it is the whole truth about part of the matter. It is added to, increased, supplemented by the determination: but in the supplementation it is not annulled, nor even altered. Its truth remains, and remains *quâ* truth precisely what it was.

Three types of judgment may be taken in illustration. (1) "The interior angles of a triangle are equal to two right angles," "2 + 2 = 4". Such judgments remain true, and

true without alteration of their truth, however much may be added to them by the development of geometrical and arithmetical knowledge. (2) "This tree is green," "the roof of my house is wet". Such judgments are true under the relations and at the time involved in their affirmation. And their truth remains unalterable, provided you are careful to remember what is affirmed in them: *i.e.* what "their truth" is. No doubt the content of these judgments, as they are expressed, is indeterminate. Their content is fixed and defined by a complex of relations: but though the judgments thus imply this complex, they do not (perhaps could not) fully express it. The truth expressed in them is vague and slight and capable of infinite further determination. But any further determination—even *e.g.* that which Omniscience would give to them—would supplement, *but would not alter*, the truth which they contain for you and me when we make them. If we say, *e.g.*, "This tree is green," "*this*" for our knowledge (for discursive thinking) is indeterminable. But if Omniscience were to determine "this," what is true for us of "*this tree*" (as fixed for us now by perception) would remain true of "*this tree*" as fixed by the infinity of relations forming the content of that Omniscience: though no doubt *more* would be true for that Absolute Knowledge of "this tree" than merely what is now true for us. Again, "*this tree*" persists through a period of time and changes its properties. In the winter "this tree" is brown, in the night it is black, and always (while it exists) it is much besides "green". But still "This tree *is* green": and the fact that it is much more besides, and that its greenness changes and vanishes, does not annul nor alter the fact that it *is* green here and now, *viz.* under the conditions in which the judgment claims truth. Nor, lastly, is the truth of the judgment rendered "relative" by the fact that "green" is relative to the normal human vision. For that too is implied in the content of the judgment as affirmed and as claiming truth. We mean to predicate of "this tree" a quality, which to the present normal human vision appears as "green": and this fact—the fact affirmed in our judgment—will hold and hold unaltered, even though the appearance would be different to the colour-blind, or to the eye of a fly, or to the normal human vision as it may be two thousand years hence. (3) Lastly, certain negative judgments afford a good illustration of the view which we are to attack. For if it is true that "I did not play golf yesterday," can the truth of that judgment be altered or in any sense vanish even for infinite knowledge? And if it is true now that "the walls of this

room are not a mile apart," can that truth be said to have altered or vanished when further acquaintance with the room enables me to judge that "the walls of this room are twenty feet apart"?

§ 2. The above is the view, as nearly as I can state it, which I wish to attack. It appears to me to be itself an instance of a "relative" truth: *i.e.* though it is, in a sense and within limits, *a* true account of the nature of true judgment, it is not *the* truth of the matter. It is possible—as I hope to show—to formulate a view which, while doing justice to the truth contained in the view in question, will also reveal its deficiencies. The relatively completer view, which thus swallows and digests the first, will doubtless itself fall short of complete, final and unalterable truth. But if it can be shown to explain the shortcomings of the first view and to contain the truth of that view in a modified and supplemented form, at least it will be clear that the first view, so far from being "absolute truth," is further removed from an ideally complete understanding than the view which, in condemning it, supplements it. For if of two judgments (or systems of judgment) A and B, A overrides B and, in overriding it, reveals where B falls short and the ground of our mistaken acceptance of B, though A may not be "absolute" truth, clearly B will be so still less. B for the future may be disregarded *per se* and in itself. All further investigation will start with A: *i.e.* with B *quâ* overridden, *quâ* altered and supplemented. If therefore I am to overturn the view that "all truth *quâ* truth is absolute," I need not maintain that my own view as to truth is "absolute". I require only to show that my own view does justice to such truth as the opposing view possesses, whilst absorbing it in its own fuller truth. No doubt if we say, "View A is truer than view B," we must have some kind of apprehension of complete truth: and to say that "A covers B and more," involves some sort of notion of what is to be covered and what would completely cover it. But it is not necessary *here* to state *what* kind of apprehension or notion, nor to formulate any view as "absolute". That Euclid's knowledge of a triangle is fuller and more complete than that of the boy who knows only that it is "a plane figure bounded by three straight lines, whose interior angles are equal to two right angles":—this we may surely assume, without asserting that Euclid's knowledge is exhaustive, complete or absolute. And I presume it will not be denied that Euclid's knowledge does full justice to the truth of the propositions known by the boy.

§ 3. (1) Our opponents will welcome the example just chosen. "Quite so," they will say, "Euclid's knowledge does full justice to the boy's. It includes the boy's knowledge and more: but the boy's knowledge remains true and unaltered. Doubtless it is only a part of the complete knowledge of the triangle: but *as a part of knowledge* it is itself true always and without qualification. Euclid knows more parts of the whole knowledge: but his knowledge does not override, annul or alter the lesser knowledge. It adds, supplements and fulfils. And the case is at least as strong in arithmetic. The simple arithmetical truths are unalterably true whether they be taken *per se* and alone, or whether they form constituent parts of the whole system of arithmetical knowledge. '2 + 2 = 4' is an immediate and yet necessary truth, an immediate inference, or an *intuitus* as Descartes rightly called it. In such judgments we are stating an implication: and the implication holds unalterably, though fresh implications may subsequently be revealed in our data. The addition of two to two units *implies* the sum four, a plane three-sided figure *implies* the equality of its interior angles to two right angles: and these implications remain, whatever else the data may also imply."

Such arguments, if we are to press them, seem to involve a theory which some at least of our opponents would contemptuously reject. For if *e.g.* in the science of arithmetic there are contained simple propositions, each of which is true *per se* without reference to any others, and true *in precisely the same sense* whether taken *per se* or taken as the basis of further propositions which are inferred from it, what becomes of "the science of arithmetic"? Arithmetic seems to be a whole, some at least of the parts of which retain in the whole the identical character which they possess *per se*. If so, is the advance of knowledge—the development of a science—merely the *addition* of truth to truth? Is geometry neither more nor less than the *aggregate* of geometrical truths: and are the simple arithmetical truths merely "collected" into the science of arithmetic, itself the "class" of arithmetical propositions? To treat a science as a "class," "aggregate" or "collection" of single truths, each of which is what it is in its singleness and remains unchanged in the collection, is (I venture to think) utterly inadequate as a theory of knowledge. It is as if one were to treat the Choral Symphony as a "collection" of beautiful sounds, Hamlet as an "aggregate" of fine ideas, or a picture by Rembrandt as a "class" of colours and lines.

But this is a view which our opponents will reject, and

will attribute to our misunderstanding. "Geometry," they will say, "is certainly not, on our view, a mere class or collection or aggregate of propositions. It is through and through a *system* of truth: and precisely for that reason the parts of that system must themselves be true. The nature of Space reveals itself in every fragment of the Extended. To know a triangle, even if you only know that it is a plane three-sided figure whose internal angles are equal to two right angles, is *so far* to know the nature of Space: and that knowledge is not altered. As you learn more about the triangle and about other forms of figure, you are indeed increasing and completing your knowledge of Space: but this is to confirm and fulfil your previous knowledge, not to condemn nor in any sense to change it. It is your view (and not ours) which renders it impossible to conceive knowledge as a system. For a system implies elements with determinate natures in determinate relations. But in your 'system' of knowledge which is 'the complete truth,' there are no determinate elements or relations, but all is shifting. Or, if you take the elements as determinate, on your view every one of them is false: and a system of falsities cannot be the Truth. If every note is out of tune—or again if each note shifts its pitch to meet the shifting pitch of each of the others—there will be no symphony. And so, unless 2+2 are 4 and remain 4 unalterably, your 'system' of arithmetical truth will be nonsense."

Now here there seems to be a confusion. For (i.) if, in knowing the triangle, I really knew the nature of Space as expressing itself therein, my knowledge of the triangle would be "complete":—*i.e.* as full and perfect as geometrical science can make it. It might be called "absolute," if it were not misleading to call knowledge of Space (*i.e.* knowledge of the Universe in respect *only* to its extendedness) absolute. But such knowledge of the triangle could not be expressed in a single judgment. It would be complete knowledge of Space in its systematic totality, and nothing short of the whole system of geometrical reasoning would be adequate to express it. On the other hand (ii.) if I know the triangle only as the boy knows it, in that fragmentary knowledge my grasp of the nature of Space is correspondingly vague and subject to modification. Knowledge of the Whole and knowledge of the Parts, where the Parts form an intimate Whole like that of the spatial system, involve one another. But each involves the other at the same level. Immature knowledge of some or all of the Parts is immature knowledge of the Whole, and full knowledge of the Whole is full know-

ledge of each and all of the Parts. Nor is the passage from the boy's knowledge to that of the geometer the addition of perfect knowledge, bit to bit. The passage is not an increase by aggregation, but a growth by expansion from within.

Certainly a System must be a whole of interrelated elements: and the elements and their relations must have distinguishable and determinate characters. But those characters attach to them, and are determinate, *in the System*: and in the System they are certainly not the same as they are outside, if outside they are at all. The notes of the symphony must have and retain a determinate pitch: but their pitch is determined by the functions which they fulfil *in the symphony*. In a sense, no doubt, the pitch of the several notes could be fixed in terms of vibrations without reference to the harmonies which they constitute in the symphony. But the nature of the notes, as constituents of the symphony, is through and through determined by their harmonic relations in the symphony, and is in those relations not what it would be if the several notes were sounded in isolation. And though $2 + 2$ are 4 and remain 4 unalterably, the whole significance of this assertion — *and therefore its truth* — depends upon the numerical system in its totality, and ultimately upon the character of the Universe within which the numerical system is a necessary subject of human thought.

§ 4. But our opponents, as I understand them, would deny our right to the assumption that the truth of a judgment must alter with the alteration of its significance.

"This," they will say, "is the very question in dispute. If you alter the significance of a judgment, you are simply making a fresh judgment. You are not affecting the truth of the original judgment; for that possessed its determinate significance, and in that significance it still is true. Thus the judgment '$2+2=4$' is true, because it adequately expresses certain elements in their relations. It is a form of expression which corresponds to a certain matter of thought: and its truth lies in this correspondence. If you choose to signify something else by this form of expression, your judgment, though linguistically the same, is different in its meaning. You are in fact 'thinking of' or 'judging about' something quite different, and whether your new judgment is true or false has nothing whatever to do with the truth of the original judgment."

I confess that I do not understand precisely the conception of "truth" which the above reply involves: and I suspect that I have not fairly presented our opponents' position. I do not know, for example, exactly what (on their view) are

the two factors whose correspondence is truth: nor whether that correspondence, as they understand it, necessarily excludes varying degrees of exactness: nor, if so, what are the grounds of this necessary exclusion. Accordingly it seems best not to attempt to criticise where I cannot be sure that I have understood, but rather to try to make my own position clear. For it is evident that we have been beating about the bush, and that the real trouble between us is as to the meaning of "truth". It would be impossible, even if I were competent, to discuss this adequately within the limits of an article. But I will attempt to sketch, however imperfectly, what I understand by "truth".

"Absolute Truth," as I understand the matter,[1] remains for us an Ideal which, just because *in one sense* we realise it, we know cannot be completely realised in discursive thinking—*i.e.* in knowledge which proceeds by judgment and inference. For in judging and inferring we set ourselves over against an Other: and our endeavour is to overcome this division, which yet is and remains the necessary condition of our knowing. *Until* this endeavour is accomplished, we shall always be trying to supplement and to alter our system of judgments so as to render it entirely "adequate" to the Other, which it can never exhaustively express. But *if* this endeavour were accomplished, knowledge—*i.e.* judgment and inference—would no longer be, for thought would be no longer distinguishable from its object: the Other, as other, would have vanished, and with it the condition of our knowledge.

As an Ideal we may, I suppose, conceive an Absolute or Infinite Subject, whose being or life is an unbroken movement through the circle of its differences: differences, which are constituted by its own life-movement, and yet in that life-movement are reduced to what they always were or are, *viz.* to moments in the Subject's own unity. We might call that whole movement, as the return upon unity from differences, the "Absolute Self-Consciousness" or "Absolute Truth": but any such expressions are really misleading. For in such an Ideal there is no "Other" and therefore no "Self". And since there is here no movement out of unity to difference which is not *eo ipso* its own recall, there is no "return upon unity from differences". Hence it only confuses the issue to speak of this unbroken continuity of the

[1] The following rough sketch of the conception of "truth," with which I am working, in no sense claims originality. But any errors in exposition must be attributed to me, and not to the writers whom I am more or less consciously following.

life-movement of the infinite Subject as "absolute truth," if by "absolute truth" we are to mean truth which our discursive thought can achieve or even profitably strive after.

We are here concerned with the Ideal of Truth for our discursive thought, the aim and partial achievement of human judgment and inference. This is Truth to which in one sense we always are attaining, or of which (if you prefer to put it so) we always are in possession. But it is Truth which, even if *per impossibile* it were completely achieved, would yet require its object over against it as an Other, and would therefore still not be the Ideal of which we have just been speaking. And again it is Truth which never is completely achieved, but in the possession of which we always are advancing. We, in our different sciences, and also at the different stages of the development of our knowledge in any branch of science, are "in possession" of this Truth in very different degrees. And the criterion for the degree of our "possession" is the relative self-coherence of the science or stage of scientific knowledge in question. In order to prevent misunderstanding, I hasten to add that "the Truth" of which I am speaking is not something to which our knowledge may approximate in various degrees, whilst itself is unchangeable and complete in sublime aloofness and independence of our knowledge. It lives and expresses itself in human knowledge, and in human knowledge only:[1] though the expression is never final nor complete, and varies infinitely in degree. The "complete truth" would be a completely self-coherent system of judgments: and it might be called "the absolute truth," with the double reservation that it remains for us an Ideal, and an Ideal for discursive thought only. For our knowledge, fortunately for us, never actually is a completely self-coherent system of judgments: though fortunately it tends—at least in appearance—to grow in completeness of inward logical coherence. And even if that growth could attain the fulfilment of its ideal, that perfected knowledge would still be a system of judgments and inferences. It would remain the true thinking "about" an object other than itself, and its object would retain in its being features or aspects or qualities which the true thinking could not adequately express.

I am aware that this account will lay me open to many criticisms. I shall be accused, perhaps, of embracing Scepticism without shame or reservation. The denial that dis-

[1] Under "human knowledge" here and throughout I include the knowledge of any finite intelligence there may be.

cursive knowledge can be absolute and final, in the sense in which the complete and undivided apprehension of the infinite subject would be so, might be allowed to pass: though even so my critics will ask whence I derive sufficient knowledge of the infinite apprehension to condemn the Ideal of discursive thought. But I have further denied that the latter Ideal can ever be completely realised: and if that is Scepticism, I must admit that I am a sceptic. But I should ask my critics what it is that they wish to maintain. Do they suggest that a finite intelligence—or all finite intelligences together—can grasp the entire nature of things, and express it in a system of judgments without possibility of omission or error, and without at any point a failure of logical coherence? If to deny this is to be a sceptic, I shall be a sceptic in good company. Or are they merely insisting that the Ideal, which on my view can never be fully realised in our discursive thought, must yet *somehow* be known to us? If so, they are insisting upon something which I have never doubted. But to say that it must be "somehow known" is very different from saying that it must be actual as reasoned knowledge.

Then (I may be asked) can *no* judgment be final and unalterable truth? And, if so, is the judgment that "knowledge is true in so far as it is self-coherent" itself a relative truth, condemned in the end to show itself partly false? And what is the meaning of "self-coherence"? A system, I should reply, possesses "self-coherence" (*a*) in proportion as every constituent element of it logically involves, and is involved by, every other: and (*b*) in so far as the reciprocal implications of the constituent elements, or rather the constituent elements in their reciprocal implications, constitute alone and completely the significance of the system. And though I am primarily concerned to maintain that *not all* truth is absolute, undoubtedly the thesis that "knowledge is true in so far as it is self-coherent" carries with it the view that no *judgment* in and by itself is absolutely true. Hence the thesis itself, taken in and by itself, cannot be on my theory the final and complete account of the nature of the truth attainable in discursive thought: nor is it possible to say with complete precision how far and in what manner the final account would involve a modification of the thesis. But I should maintain that any truth is final *for human knowledge*, the alteration of which would render human knowledge impossible. In that sense the doctrine conveyed in the thesis seems to me to be "final" truth; though its expression *in the form of a judgment* is clearly inadequate, and

though that judgment itself is destined to modification if not to complete destruction.

§ 5. The position which I have sketched is open to many other criticisms besides those just mentioned. For I have treated truth as an ideal "which lives and expresses itself in human knowledge, and in human knowledge only": and the whole question as to the relation of the individual and the universal aspects of knowledge and truth is on our hands, if any critic chooses to raise it. But for the present I cannot attempt any further justification of my position. I will draw certain consequences with regard to the mathematical judgments, and then pass on to consider the judgments of perception.

Any judgment—*e.g.* the judgment that "the interior angles of a triangle are equal to two right angles" or that "2 + 2 = 4"—is to be considered as essentially a constituent of a system of judgments. In so far as the judging subject explicitly recognises the dependence of the judgment (in its significance and its truth) upon the other judgments which along with it form such a system, he may be said to read in the single judgment the system which it implies: and precisely so far the judgment possesses for him the most complete truth of which it is in its nature capable. That truth may be called "absolute," "final" or "complete": but it is so only with certain reservations, since no system of knowledge as actual for any human subject is completely self-coherent or final truth. And since "truth" for us means articulate knowledge—for we are speaking of the truth of discursive thought—we must look for such relatively complete truth not in isolated judgments, but rather in explicit systems of judgments: *i.e.* not in the single judgment that "2 + 2 = 4," but in the body of reasoned knowledge which we call "the science of arithmetic". The judgment "2 + 2 = 4" may be to the arithmetician a short-hand symbol for the whole science of arithmetic as known at the time: in *his* thinking, it may signify all that could be read in it and expressed by the best arithmetical knowledge hitherto attained. But if so, "2 + 2 = 4," as *he* judges it, is very different in its significance and its truth from the judgment of the child who is learning the tables of addition, in spite of the identity of linguistic expression. The relatively final truth, which the arithmetician expresses, attaches not to the single judgment *as expressed*, but to the whole system of arithmetical science which the judgment is for him. And if arithmetical science is to be taken as final and absolute truth for us, that again must mean that in arithmetical

science we read that fuller and more self-coherent system of judgments, which is—as nearly as we can render it in discursive thought—human experience in its essential form. For though the most complete system, which we can attain, falls short of that ideal of self-coherence, of individual systematic totality, which alone would constitute "absolute truth" for discursive thought, clearly no less complete system —*a priori* no single judgment—can stand as final and absolute truth.

§ 6. (2) A judgment of perception, such as "this tree is green," comes in principle under what has been said. What it affirms is subject to a complex mass of conditions unexpressed and yet implied. Its significance, and therefore its truth, must in the end depend upon this inarticulate background. It could claim unalterable or final truth, only if it were entitled to stand as an integral constituent in the ideally self-coherent system of judgments which would be complete human knowledge. And the judgment of perception, as such and as formulated, is entitled less than most judgments to claim such a privilege. For the judgment of perception is the product of a comparatively low grade of experience. It does not persist as such and unaltered in the thought which has risen above the level of everyday conversation, of historical narrative, of matter of fact, and of the practical affairs of life. Even here, indeed, there is more than the judgment of "this" "now" and "mine": and the more does not leave the judgment of perception pure and unadulterated and without internal modification. And at any rate the judgment of perception is a totally inadequate vehicle for the expression of knowledge which has any claim to be exact. In the main, and broadly speaking, scientific thought moves in universals. "This" and "that," and the distinctions fixed by reference to the individual subject, give place in science to reflective determinations, which are revealed by analysis in the sensuous given, but which are not identical with it. Knowledge, in short, begins with the discovery and the formulation of universal and necessary connexions of content. And the advance of knowledge leaves no vague sensuous subject (no "this tree"), no vague sensuous attribute, and no mere coincidence of attribute and subject. The more adequate knowledge of "this tree" is not an accumulation of judgments of perception, but a revolution in which "this tree" is swept away and determinate connexions between determinate universal concepts are substituted. In the science of botany our judgments of perception *as such* find no place.

Nor will it do to protest "But the fact expressed in the judgment of perception remains unalterable. For suppose our knowledge to expand until it covers all Time and Space: suppose even that it becomes Omniscience. Yet, within that complete and all-embracing experience, the original judgment will persist as a clear, if somewhat attenuated, truth:—a thread of pure gold within the infinite consciousness." There is indeed a sense in which this contention is true: but in that sense it hardly seems relevant. Omniscience, we may admit, must be knowledge of everything: and in the infinite experience nothing can be lost. And so every fact and every feeling—everything in any sense real—as an element in that experience is invested with the timeless necessity which defies change or destruction. Nothing, we may agree, is "lost": and in this sense the past and the future "are" no less and not otherwise than the present, error and sin possess the same necessary being as truth and goodness, and there is no difference between the trivial and the important.

But *in what precise sense* is the fact expressed in a judgment of perception unalterable? "This tree is green" expresses what is matter of immediate experience to you here and now and to other sentient subjects under the same conditions. It is true within a narrowly restricted area: and beyond that area its truth is liable to modification and perhaps to destruction. The experience, and the expression of it, are no doubt necessary incidents in the world-process, or necessary elements in the infinite experience. But they are "necessary" precisely as and when and how they occur in the process or subsist in the experience. In so far as the infinite experience is complete and all at once, all the elements thereof are *for the infinite subject* timelessly actual. But in so far as the infinite experience appears as a world-process and unrolls itself in time and space, the elements have that actuality which belongs to them as such appearances: *i.e.* they occur under determinate limitations of time and place, and not otherwise. Thus the immediate experience and its expression in the judgment of perception are "unalterable facts" in their actuality: *viz.*, as possessing their determinate position in the series of events. And if the world-process were, so to say, to go back upon itself, and to unroll its series of events afresh from the beginning, these experiences and their expressions would recur in their positions with "unaltered" actuality. The mummies would walk the earth again, and give expression to their feelings in "the same" judgments of perception that were passed by the

ancient Egyptians: and thus (but not otherwise) the "unalterable truth" of a judgment of perception might be vindicated. For the judgment "this tree is green" expresses what is actually matter of direct experience to you and to other sentient subjects. A hundred years hence you and your vision, they and their experiences, "this" tree and its state, have vanished into the past: and cannot for human knowledge be restored *as such*.

It is irrelevant to insist upon the ineffaceable reality of all the elements of the infinite experience: and it is a confusion to identify their "reality" as elements in that experience with their "truth" as entering into the texture of human knowledge. The sentient subjects of the past, their immediate experiences, and the "truth" of their judgments of perception as expressing those experiences, have as such vanished for us. They are at best for us the precarious products of a most elaborate inferential reconstruction, which in any case can never actually *reinstate* them. But the matter of their experiences as the content of their judgments has passed over into the fabric of our knowledge. In that fabric their judgments of perception persist and cling to life. But the distinctive features of those judgments, their individualities, are lost: and the life, to which by a metaphor you may say "they cling," is not *their* life which they formerly enjoyed. The sciences of botany, of the physiology of the senses, of the physical conditions of colour, etc.:—these may be said to absorb and to preserve the "truth" of such judgments as "this tree is green". But the sciences neither contain any judgments of perception *as such*, nor preserve their "truth" in an unaltered form.

§ 7. (3) Of the negative judgments which were quoted in § 1, the first ("I did not play golf yesterday") does not require any special consideration. It comes in principle under what has been said about the judgments of perception. The "yesterday" and the "I," to which the judgment refers, will vanish: and though they may in some sense be reconstructed by a system of inferences, they will never be *as such* reinstated. And even if the "truth" of the original judgment is preserved in the sense that its content is absorbed and used as material for a system of knowledge, the judgment most certainly is not enshrined there as an unaltered truth in its ancient form.

In the second example ("the walls of this room are not a mile apart") a further point more clearly emerges. For the knowledge which that judgment conveys, or the truth which it expresses, is obviously not what it carries on its face. It

professes to give us a decisive piece of information, though in a negative form. Really it gives us a vague and indeterminate positive, which the negation implies and on which it rests. The implied positive information is so vague that it can hardly be stated. For in order to state it at all clearly, we should have to rise above the level at which the negative judgment could significantly—or indeed sanely—be made. But as our knowledge of the room grows in definition and completeness, the implied positive develops into the completer affirmation "the walls are twenty feet apart". And in the greater significance and fuller truth of this positive judgment, there is in no intelligible sense a "survival" of the "absolute truth" that the walls are not a mile apart. The walls of this room "are not less than an inch apart," they "are not made of gold," nor are they "formed by elephants standing shoulder to shoulder": but is it really suggested that complete knowledge of the walls and their relation contains all these "absolute truths" surviving in itself?

I am not maintaining that in an ideally complete system of knowledge the negative judgment can find no place. On the contrary, I am firmly persuaded that "System" is meaningless without distinction, and that negation is no less indispensable than affirmation in discursive thought. But the apparent finality of the negative judgment in the instance quoted is due to the thinness of the positive content implied. The judgment in fact approximates to the "infinite" judgment. And we must not infer from its apparent decision that it expresses an absolute unalterable truth. Whatever distinctions may or may not persist and be emphasised in the system of knowledge as it grows in concreteness and self-coherence, clearly negative judgments of the type which has been instanced are trivial and provisional and have no special claim to finality.

II.—ON THE PSYCHOLOGY OF A GROUP OF CHRISTIAN MYSTICS.[1]

By James H. Leuba.

I.—The Religious Tendencies of the Christian Mystics.

From the psychological point of view the most characteristic trait of the Christian Mystics is what may be called their 'inward-mindedness,' *i.e.*, the preponderance in their consciousness of the sensations, ideas and feelings of subjective origin, to the detriment of the sensations, ideas and feelings determined more or less directly by, or referring to, the outside world. Prof. Royce has said of the Mystics that "they are the only thoroughgoing empiricists," and quite correctly, provided it be understood that the field of their empiricism does not include the objective world. Inner experiences hold their attention first and last. They are thus at the opposite pole from those persons whose stolid substance is rarely disturbed except by the impact of the external world.

The rare possibilities of an unusual sensitiveness to what goes on within that portion of ourselves correlated with the sensations, feelings and ideas referring to the self rather than to the physical outer world, are obvious. It is to this temperamental disposition that the Mystics owe their most noteworthy peculiarities. Those to which I desire to draw your attention during the first part of this paper take the

[1] A paper read in part before the American Psychological Association at its annual meeting, Washington, D. C., 1902. The first part of it is little more than a series of notes upon the tendencies of the Christian Mystics. The second part—the one dealing with the interpretation of the mystical experiences—is a little fuller. Let the reader bear in mind that I deal here with only a few of the most important Christian Mystics: Mme. Guyon, François de Sales, St. Theresa, Ruysbroeck, Suzo and Tauler. I do not inquire how far the statements referring to them are also applicable to the other varieties of Mystics.

For a more complete and detailed study of these Mystics see my two articles in the *Revue Philosophique* for July and October of 1902.

form of a deepening, an intensifying of four of the needs or tendencies found everywhere among civilised peoples. Two of these are of very great interest to the student of human development. I have called them, respectively, the tendency to organic enjoyment and the tendency to the universalisation of action.

I am going to pass these four tendencies in review, beginning with the two less significant ones.

1. *The Need of Mental Peace, of Intellectual Unity.*

Among the Christian Mystics this need finds at all times some satisfaction in the control exercised by the idea of God upon the stream of consciousness. But it is chiefly in the daily exercises of Meditation and above all in the rarer moments of Ecstasy that the unification of the mental contents is obtained, and then not by the reconciliation of opposed elements, the gaining of more general principles, but by the simpler method of elimination. The simplification of the mental life frequently ends for the Mystics in a monoideism, or even in the total absence of all ideational contents. The person is then in a state of trance.

2. *The Need of an Effective Support.*

The intense need of moral help, of loving support, felt by the Christian Mystics, generates in them a keen and persistent sense of the presence of the *Great Comforter*, as Romanes called Him. Their particular sensitiveness makes it possible for them to *feel* Him and not only to conceive of Him or to see Him in visions. In the higher degrees of the *orison*, God is no longer thought of, He is owned by the devout soul; He comes to her, dwells with her and fills her with a surpassingly sweet sense of security and peace. The intenser feeling of a wider, more powerful, more loving Presence supplants father and mother, wife or husband. The consciousness of the presence of God is to the Christian Mystic what the control exercised by the hypnotiser is to his subjects, with an unbounded measure of confidence, admiration and love added to it.

3. *Tendency to Organic Enjoyment.*

In renouncing the work of the flesh—as most of the great Christian Mystics have done—they do not give up the passionate enjoyment which it yields. They are still ready, nay eager, to secure carnal delights, provided it may be obtained otherwise than through the ordinary channels of sexual

gratification. One of the greatest attractions of Mystical ecstasy is the presence in it of those voluptuous feelings.

Ecstasy is, as we shall see, a love trance, as far as our Mystics are concerned. Saint Theresa tells us that she usually enjoyed intoxicating delights in the company of Jesus. Ruysbroeck declares that "the pleasure is greater, more voluptuous, *for the body* and for the soul, than all those the world may give". This experience is not peculiar to one or another of the Christian Mystics; it is a trait common to them all. The voluptuous excitement in which they are at times plunged may be paralleled only by the most passionate physical love. Mme. Guyon, frigid towards her husband, wrote of Jesus Christ, with whom she had contracted a so-called mystical marriage: "I love Him so that I can love no one but Him. I have lost every other inclination or appetite." Speaking later on of that period of her life, she said: "I was like one of those drunkards, or one of those lovers who think only of the object of their passion".

For information as to the physical seat of this pleasure we may go to Saint Theresa herself. She had at times angelic visitors. Once the vision of a very small and very beautiful angel was granted her. He held in his hand a long golden shaft tipped with fire. Every once in a while he would plunge it into her heart and push it down into the bowels. As he withdrew it, it was, says she, "as if my bowels would be torn away and I was left burning with the love of God".

Take in connexion with the preceding the interesting case quoted by Havelock Ellis in his *Psychological Study on Auto-Erotism*. A woman physician, a disciple of the 'Brotherhood of the New Life' founded by T. L. Harris, described thus one of her religious experiences. "One morning, I awoke with a strange new feeling in the womb, which lasted for a day or two; I was so very happy, but the joy was in my womb, not in my heart." The difference between these two experiences, as far as the point at issue is concerned, is that the woman physician says womb and the Spanish saint says bowels.

The sexual origin of at least the most intense and highest (according to their own valuation) of the divine raptures cannot be denied. They result from the setting into activity of at least some of the organs of the sexual life, to an extent varying with each person, and always without his knowledge. It is a distinct form of erotomania.[1]

[1] There are other possible sources of intense organic enjoyment, independent of the sexual life. See the *Revue Philosophique*, Oct., 1902.

Concerning this tendency and the satisfaction given to it by the Mystics three points must be briefly noted.

(*a*) If the Mystics refuse their body the ordinary satisfaction it craves, it is not because of the unholiness of the pleasure itself, but because sexual passion, even when within legitimate bounds, places one so frequently and, usually, so irresistibly, in opposition to the finer moral promptings. Therefore it is their chief enemy. Observe that in this they do no more than carry out consistently, but to an extravagant issue, a struggle the appearance of which marks the dawn of civilisation. They are the champions gone mad of the civilised world in its great, and mostly secret, battle against the evils of the flesh.

(*b*) Erotomania—we need not shrink from using the term—is here in the service of lofty ideal ends. As the enjoyment does not come from practices guilty in their eyes, but, on the contrary, from the vivid realisation of the surpassingly great love to them of an absolutely good God, its effect is elevating rather than debasing; it becomes a strengthener of holy resolves; it cements together the tendencies according to the will of God and increases their power. Allow me to recall in this connexion the opinion held by many among those who have paid serious attention to the relation of the sexual function to psychic life, that the irradiation of sexual energy when deviated from its ordinary channel of discharge accounts for much of the growth of the higher mental life.

(*c*) The physiological mechanism of sexual life is, of course, too solidly established and, moreover, the yearning for the rapturous thrill of the flesh, is too strong and in itself too innocent to permit of the sudden elimination of that part of our nature. But the Christian Mystics have found a way of gratifying both the needs of the body and of the soul, and at the same time of avoiding the moral danger lurking in the ordinary way of giving them satisfaction. This course is erotomania with the idea of Jesus, the Virgin Mary or God as respondent.[1]

I like to look upon this phase of the life of the Christian Mystic as an experiment tried by human nature to bring the sexual life more completely under the control of the higher nervous centres and thus to make it serve for the furtherance of that to which the individual ascribes greatest worth. I need hardly add that this is not 'a re-interpretation of Religion as perverted sexuality'; it is merely a singling out of *one of the factors* prominent in the religiosity

[1] I am not now concerned with the physiological disorders to which such a practice as this might give rise.

of *a group of Christian Mystics*, coupled with an attempt to interpret its effects.[1]

4. *Tendency to the Universalisation of Action to Ethical Unity.*

Whatever importance may attach to the preceding motive, the chief significance of Christian Mysticism belongs, it seems to me, to the heroism of their unremitting efforts in favour of universalised conduct, *i.e.*, of action proceeding from generalised motives. Their own habit is to designate such conduct as the performance of God's will.

They differ with reference to this point from the ordinary well-intentioned man, in that to the Mystic compromises are intolerable where the will of God is concerned. The life of all of them is for most of its duration a fierce struggle against the tendencies of the so-called *Natural* man; not that these primitive tendencies are in them stronger than in other persons, but that the yielding to them is never sanctioned by the higher self. The strife between the lower and the higher motives assumes in the Christian Mystics a keenness rarely equalled in other classes of men.

In respect to this fourth tendency the Mystics mark, on the whole, a step in advance, since what distinguishes them is the greater motive power of those altruistic, those universalised, ideas more and more generally recognised, in civilised societies, as the desirable guides of action. What is usually mere limp desire or impotent inclination has become in them unconquerable, if not always victorious, impulse. The highest good they recognise has at its service a psycho-physiological imperative mechanism; the 'ought' is backed in them by a compelling motor force. This is probably the most valuable fruit of their particular sensitiveness to inner events.

II.—Mystical Ecstasy.

Urged by these four tendencies the Christian Mystics have come to practise a peculiar religious exercise called *Orison*.

[1] See a long footnote on sex in Religion, pp. 10-12 of *The Varieties of Religious Experience.*

On the whole I find myself in agreement with the opinion of Prof. James on the relation of Neurology to Religion. I believe, however, that he has not ascribed to the amatory desires the place which belongs to them in the religious consciousness of those Mystics with whom he is chiefly concerned in the chapter on Mysticism. If sex does not make religion it often gives it its particular form. It is, for instance, chiefly to the predominance of the love passion that Suzo, Ruysbroeck, Mme. Guyon differ so markedly from the cold, objective type so impressively represented by Calvin.

It is, in its lower degree, a meditation upon God and, in its higher, a trance looked upon by them as union with Him.

I do not think that a more remarkably effective way of giving satisfaction to the four tendencies we have enumerated could have been devised than this one, although it is merely the result of empirical wisdom. Let me put before you in a rapid sketch the changes which take place in consciousness during the journey of the soul to God. Several great Mystics have left minute and subtle descriptions of it, and, however they may differ in points of detail, they are at one as to those larger features with which I am going to deal. I shall follow St. François de Sales (*Traité de l'Amour de Dieu*) and Mme. Guyon (*Moyen Court et Facile de faire Oraison*).

In Meditation, with which *Orison* begins, the soul seeks motives of love and takes delight in them, says St. Francis, and Mme. Guyon adds that the end is not to analyse and reason, but "merely to hold the attention" upon the subject of the meditation. When this is secured the soul passes to the second degree: *Contemplation.* It is defined as "nothing more than a simple and permanent attention of the mind to divine things; a consideration of the loved object as a whole," in a lump as it were. Mme. Guyon emphasises the importance of holding the attention upon God, not by the understanding, but by the affections. They all agree in saying that whereas Meditation requires some effort and mental activity, in Contemplation the soul has become passive. There is in it greater pleasure, since God and His great love have been found. "The soul is so quietly attentive," says St. Francis, "to the kindness of her Beloved, that she seems hardly attentive at all."

This mental quiescence and the amorous enjoyment grow as the *Orison* becomes deeper. A little farther on, when the state called by St. Francis "Amorous quietude" is reached, "the soul remains, as it were, deprived of life; it is only with difficulty that she can speak and answer; all her senses are benumbed". Nevertheless, although she can hardly answer, she still hears God speaking to her. On certain occasions it happens that the trance goes as far as absolute unconsciousness: "The soul," to quote again from St. Francis, "ceases even to hear her beloved; she does not even feel any sign of His presence. Then, the soul on awakening, may well say: 'Truly, I have slept with my God, in the arms of His divine presence and I knew it not'."

In this progress of the soul, the two great periods observed in hypnosis are clearly marked: the loss of muscular

control and later the loss of sensory perceptions. It differs from the ordinarily induced hypnosis in that it is dominated throughout by the feeling of love. This is because the person upon whom the attention is concentrated is first of all an object of love. The mystical ecstasy is then a love trance, more or less profound, in which the idea of God, or of Jesus, or of the Virgin, takes the place of the hypnotiser.

What I desire particularly to point out is that the so-called 'higher,' most excellent, religious exercise of the Mystics gives them at once mental peace, a vivid feeling of the presence of the Great Comforter, the delights of passionate love and, moreover, brings with it a strengthening of all the tendencies that are believed to be in accordance with God's will.

When we want ineffective desires to triumph there is no more powerful means at the command of science than to induce hypnosis and then to suggest the wished for victory. Now the Mystics have developed, in their endeavour to satisfy their needs, a method of worship which places them, while under the control of the God-idea, in a condition of increased suggestibility. They become clay in the hands of the potter. The value of this control depends, of course, upon the contents of their consciousness of God.

Allow me to add, that in all religions the attitude looked upon as most divine is one of increased suggestibility, induced either by drugs, by violent physical exercise, by concentration of the attention upon some point of space, or otherwise. So that the most general and, in my opinion, the most significant statement which the psychologist can make regarding the religious attitude *par excellence* is that, among all peoples and at every degree of their development, it is a trance dominated by tendential ideas, not everywhere the same, but expressing always the needs accounted highest by the individual or by the society to which he belongs.

The more ordinary religious consciousness, as, for instance, the one characteristic of ordinary worship, is an approach towards the seldom realised perfect religious attitude.

III.—The Mystical Ecstasy as Revelation and as Union with God.

Let us ask now, in the third and final part of this paper, what meaning the Mystics give to the religious ecstasy, and how far, or in what sense, their opinion is justifiable. The interest of what I have to say here will be much increased if you happen to have present in mind the views of Prof.

William James on this point. I regret that time has not permitted me to refer more particularly in the course of this paper to this author's illuminating analyses and perplexing conclusions.[1]

Regarding their trance the Mystics make two affirmations of the highest consequence. It is, they say, (*a*) *a revelation*, (*b*) *a union with God, or an identification of the individual with the Absolute Essence.* It is to these interpretations that they owe a large part of their celebrity.

First, concerning the revelation, there are at least four different kinds of experiences entering as part-explanation of the belief in the transcendent, unutterable revelations received by the divine lover during his ecstasies.

1. In the love trance the feelings and the will of the individual come into unison with the feelings and the will attributed by him to God. As mental activity decreases with the deepening of the trance, the feelings and desires belonging to the subject and those ascribed to God, are no more held separate; they necessarily fuse together, leaving but one being: man and God in one. This is well described by St. Theresa. "My *Orison* did not take place in my head; it was an *Orison of enjoyment and of possession in the will* . . . all distinctions disappeared, there was nothing but a desire for deeper love, without the presence of any motive or ground for loving." Mme. Guyon wrote, speaking of one of her *Retreats:* "là tous les entre deux furent consumés, il se fit un vrai mélange de l'Amant et de l'Amante de telle sorte qu'ils furent faits une même chose". Parallel passages are to be found in the writings of all the Christian Mystics.

The impression of intimacy resulting from the fusion of one's own feeling and will with those ascribed to the divine would be in itself quite sufficient to lead most people to the belief that there had been an intellectual penetration of the divine mystery, even though they should be aware of the fact that in the higher degrees of *Orison* the mind is inactive. St. Theresa is a good illustration in point. She actually attempts a description of God; she tries to give intellectual form to the very revelation she has declared to be entirely in the realm of the feeling and of the will. Her most successful attempt is ludicrous enough. Here it is: "I shall say then that the Divinity is like a diamond superlatively clear and much larger than the world; or like a

[1] William James, *The Varieties of Religious Experience.* See especially Lectures xvi., xvii., xx. The articles of the *Revue Philosophique* to which I have referred were written and the first of them published before Prof. James's book appeared.

mirror similar to the one in which the soul was shown me in the preceding vision; only so much more sublime that I have no words to describe it".

2. The love feeling and the god-like attitude of the subject persist for a certain length of time after the trance. This may legitimately be described as an *inspiration* and an *illumination* since, on recovering, the understanding sees more clearly the will of God and the will performs it more readily. It is no doubt in this light that many passages, apparently claiming something more, should be interpreted, as, for instance, the following statements of Eckhart: "I have in my soul a power that enables me to perceive God . . . nothing is so near to me as God. He is nearer to me than I am to myself."

3. Here is how Tauler describes in his sermon for Whit Sunday another of the experiences which contribute to the belief in a revelation: "When all the powers of the soul are collected and turned inwards, it often happens that some eternal truth presents itself with irresistible clearness. This happens not unfrequently in morning sleep just before awakening." This last remark is perfectly correct, as psychologists well know. But, at least in the case of the Mystics we are studying, nothing remains on awakening but the *feeling* of a glory that is no more, the *feeling* of having entered the Holy of Holies or the *feeling* of having encompassed the deepest philosophical mysteries. Nothing but the after-taste of glorious dreams remains when the intellect returns to its task.

The psychology of this illusion is not doubtful. Three things only are necessary to produce it: (1) The inhibition of the ideas which, in waking life, ordinarily oppose themselves to a too summary solution of the problem considered; (2) A feeling of ease and of power which may, in part, and perhaps in entirety, be due to the just mentioned inhibition; (3) An affective condition compounded of the tender feelings and of awe. The first and the second of these three conditions occur commonly in sleep, and the third is the unfailing accompaniment of the mystical trance and this for reasons now well understood.

4. The Mystic is at times favoured with auditory or even visual hallucinations. God speaks to him comforting or guiding words. Here we have no doubt an intellectual revelation. But if the moral guidance they receive constitutes the whole of the mystical revelation, little fuss need be made about it. God can glean no glory from having anything so completely common-place (in as far as its in-

tellectual aspect is concerned), so entirely within the possibilities of ordinary mortals, attributed to Him. As a matter of fact, their claim soars far above what could be granted on that score and this on account of the other non-intellectual experiences already mentioned. The conception of subconscious brain activities or of subliminal personalities may easily be turned into account in an explanation of guiding hallucinations.

The matter, then, stands thus for our Mystics: On the one hand, they are convinced that God reveals Himself to them, and, on the other, they find themselves unable to give definite verbal form to the supposed revelations. It is an easy step from this to the well-known conception of a mysterious faculty above reason to which the Revealer addresses Himself. Ruysbroeck, for instance, affirms in the *Spieghel der Ewigher Salichcit* that "when manifesting Himself the Father elevates the soul above the reason, in the Void without image. There the soul is simple, pure and without any content, and in this pure vacuity the Father brings forth His divine light. In this light neither the reason, nor the senses, nor observation have any share."

The belief in the mysterious, unutterable, *knowledge* obtained in ecstasy is shared not only by the Christian Mystics but more or less by all those to whom the name Mystic is applicable. It is one of the most deeply rooted of religious superstitions. Its fourfold root is, as I have tried to make it out:—

(1) The feeling of intimacy with God arising from the bond of love and from the disappearance of all desire or tendencies opposed to His will, as understood by the subject.

(2) The clearer understanding of God's will *after* the ecstasy, and the greater ability to perform it.

(3) The illusory intellectual illumination resulting from inhibitions in the ordinary antagonistic developments of associations, and from a feeling of ease, of power.

(4) The visual and, especially, the auditory hallucinations.

I pass now to the second claim which is at the same time the fundamental philosophical doctrine of Mysticism. The 'sleep of the powers' is, they tell us, a Union with God,[1] a synthesis of the individual spirit with the Absolute. This doctrinal statement is, of course, not a mere description of their bare experience; it is an interpretation. The question before us is, in what sense is this construction admissible,

[1] Pfleiderer somewhere defines Mysticism as the feeling of the union of the self with God.

or, if you prefer, why should they interpret thus a particular experience?

A full answer to this query would require a careful study of the mystic trance and an examination of the notion these people have of God. I shall for brevity leave the first part of the inquiry as it stood at the conclusion of the section on ecstasy and address myself directly to the second.

The Primordial Being is, according to Eckhart[1]—the most speculative of our group of Mystics—the simplest substance. He calls it *Grund*, *Boden*, *Wurzel*. It is neither this, nor that, it is the Being without being—*das Wessen ohne Wesen*,—above all existence. Nothing may be predicated of Him because that to which a predicate may be attached is, in so far, determined and therefore is not yet God. As to God's creations, they have no real existence as individuals; they exist only in as far as they are integral parts of the *Grund*.

Boehme, Suzo and Tauler are, in a general way, in agreement with Eckhart. Boehme, for instance, uses the term *Urgrund* to name the Essence; he describes it as without form, absolutely indeterminate; it is unity and perfect identity; it is nothing; it is the abyss, the infinite.[2]

Now, the condition of a person in a mystical trance comes very near this negative definition of God. You remember that as the ecstasy deepens, the intellectually apprehended distinctions lose their sharpness of outline and finally disappear in an undifferentiated homogeneity. The multiplicity of existences is replaced by a Great All, simple, without attribute, mysterious, infinite. Why then should they not identify the trance state with God?

But we find ourselves here face to face with a monstrous absurdity. In itself the *completed* mystical trance is nothing (since in it the loss of consciousness is absolute). It is not even that substantial Nothing which in certain metaphysical jugglery is made into the Essence of Being, but a Nothing which has no existence. How comes it, then, that this state of non-existence is identified with God; through what magical art can enough reality be injected into it to make it synonymous with the fulness of the divinity? The entranced soul described by our Mystics as naked, absolutely empty, etc., is to them, nevertheless, not the equivalent of non-

[1] *Praedigten* and Stoeckl's *Philosophie des Mittelalters*.

[2] See a chapter on Boehme in Boutroux' *Etudes d'histoire de la Philosophie*.

It is impossible to say how far this conception of God is modelled upon the trance state itself.

existence. It is after all something more because of the following circumstances. When, self-consciousness having returned, the soul thinks of the preceding moments it becomes aware of a break in its life, of a void, of a nothing. This nothing is transformed into an existent something by the very fact that it has become an object of thought. It is henceforth the non-existent which nevertheless exists: the unconscious trance has come to enjoy that particular kind of reality which the mind gives to all its objects. Only—and here is the error of our Mystics—this nothing-thought-of is by no means the same as the absence of consciousness constituting the void.

But this is not yet the most potent reason accounting for the identification of a something of which nothing may be predicated, with the Divine Substance. An observant reader is struck, even in the most philosophical of the Mystics, with the anomalous presence in their definition of God of certain significant words. Eckhart, for instance, occasionally uses the expression Eternal Silence, to designate the *Grund*. He speaks of the Eternal Silence reposing in himself, and Boehme affirms that the *Urgrund* is all silence, repose, eternal peace; more than that, it is free from suffering; yet more than that, it is "the Eternal Good, eternal sweetness, eternal love".[1] Here is indeed a Nothing sufficiently well filled with positive qualities to make of it a legitimate object of desire! If, then, the Mystics desire union with God it is not, as might have seemed at first glance, because He is the All of which nothing can be affirmed; not in the least. Mystical philosophers are no fonder of emptiness than other men. If they woo the Absolute it is after all because in Him some of the deepest human tendencies find their satisfaction. For the Christian Mystics God is, philosophical utterances to the contrary, at least *peace bathed in love*. And what is that but a love trance? They assimilate God with the most blessed experience with which they are acquainted; they make Him in the image of the divine moments which precede and follow the loss of consciousness in ecstasy.

Allow me, in conclusion, to quote a short passage from the *Journal* of the Genevese Philosopher, from which appears clearly enough what 'possessing God' *really* meant to him. "For an hour past I have been the prey of a vague anxiety. I recognise my old enemy. . . . It is a sense of void and anguish; a sense of something lacking: what?

[1] Boutroux, *loc. cit.*

Love, peace,—God, perhaps. . . . Of all the hours of the day, in fine weather, the afternoon about three o'clock is the time, which to me is most difficult to bear. I never feel more strongly than I do then 'le vide effrayant de la vie'". The passage is dated 31st March, 4 P.M., *i.e.*, about the hour of lowest vitality.[1]

[1] The utterances of St. Augustine upon the Divine Substance are quite interesting in this connexion. Récéjac has gathered them together in a note to page 133 of his *Fondements de la Connaissance Mystique.*

See also how Maine de Biran describes the presence of God. *Maine de Biran, sa Vie et ses Pensées*, by Ernest Naville, 1857, pp. 316, 324.

III.—PROF. JAMES ON 'HUMANISM AND TRUTH'.

By H. W. B. Joseph.

Prof. James is not the godfather of Pragmatism, and he acknowledges that in its grown form it is not of his rearing. But he was foster-father once; and most readers probably knew of the theory first through him. If they failed to understand clearly the philosophical position indicated, the fault may not have been altogether theirs; for the indications were slight and fragmentary. But they must have been the more pleased when they saw that he had devoted an article to explaining what, in his view, Pragmatism means. The theory has indeed lately changed its name; but Humanism is a word of ancient and distinguished history; and one may be pardoned if one does not willingly take part with those who would unnecessarily wrest it to a new and unconnected meaning.

This paper aims at nothing more than to examine the article of Prof. James. If I tried to state what the doctrine of Pragmatism seems to me to be, and were to examine that, I might be told I had misunderstood it. I am content to consider what it seems to Prof. James to be; and play (if I may use his own expression) with the conception he has put forward.

He begins by referring us to the opinion of Mr. Peirce. "If it can make no practical difference which of two statements be true, then they are really one statement in two verbal forms; if it can make no practical difference whether a given statement be true or false, then the statement has no real meaning" (p. 457). Pragmatism meant, as Prof. James originally used the term, a method of carrying on abstract discussion which applies the above principle to the determination of controversies; for where the practical consequences of the truth of two propositions are the same, or nil, there is nothing to quarrel about.

But this 'pragmatic method' of dealing with controversies is distinguished from the more thorough-going pragmatism

which has been developed in England. The former holds that "truths should *have* practical consequences"; the latter, that "the truth of any statement *consists* in the consequences, and particularly in their being good consequences" (*ib.*).

I am not clear about this distinction. What is meant by saying that "truths *should* have practical consequences"? It cannot be meant that they ought to have them, but sometimes don't; nor can it be meant simply to say that they *do* have them. It must be implied that they are no truths unless they have them. Now if the truth of a statement *consist in* its practical consequences, it is at least clear that a statement that has no practical consequences cannot be true; though the position is on other grounds difficult to maintain. But if the truth of it be one thing, and the having practical consequences another, the first cannot depend for its possibility on the second.

In order to see this, we must distinguish between a statement, and the truth of a statement. It is clearly absurd to say that the truth of a statement consists in the consequences of its truth; for in the very act of identifying its truth with its consequences, you are opposing them to one another. And it is not less absurd to say that the truth of a statement, though not identical with its consequences, depends for being on them. It may be that there is no fact which could be otherwise than it is without involving consequences that would affect somebody in a way to make us call them practical; but to say this is not to supply any criterion, by which to judge whether a given statement is capable of truth or falsity. It could justify us in saying that the truth or falsity of any statement must make a practical difference somewhere; but not in saying that the statement was unmeaning because we had not found that difference, or that two statements meant the same thing because we could find no practical difference in their consequences.

That truths do have practical consequences may be believed; but if so, we shall believe in the consequences because we believe in the truth, but settle the question of truth or falsehood independently. That they should have practical consequences, if it means anything else than that they do have them, must mean that a statement is true because it (and not its truth) has practical consequences; and that is to make the truth of a statement consist in its practical consequences.

Now though this position is not self-contradictory (as it is to say that the truth of a statement consists in the practical consequences of its truth) it is very difficult to understand it.

What are the consequences of a statement, as distinguished from those of its truth? I can only think of two senses in which the expression might be used. They may be the consequences of the belief of the statement. But to believe a statement is to believe that it is true; so that its truth again becomes something which we are bound to conceive as different from its consequences, even in professing to identify it with them. Secondly, they may be the reaction to which the statement psychologically prompts a man. When I say 'rats' to a dog, it begins sniffing and prying; yet the dog can hardly be credited with believing it true that there are rats in the room. It is possible—I do not say that it is profitable—to attempt to apply to the human mind a psychological treatment which ignores the distinctive character of logical operations; to treat the belief in a judgment as the force of an 'idea,' and to regard the idea as a mere psychic fact or presentation. From this point of view, a statement might be called true, when the reaction to its 'apprehension' was beneficial. It may be noted that the *truth* of a statement would consist not "particularly" but exclusively in its consequences being good: for consequences, without reference to their being beneficial or the reverse, would not distinguish its truth from its falsehood, since contradictory statements might both prompt to some reaction.

Of course, a 'statement' so regarded is not really, for the person reacting to it, a judgment at all. And it is impossible to apply this conception of truth to the judgment which enunciates it. Just as scepticism exempts from its suspicion the reasoning by which it is supported, so when I say that the truth of a statement consists in the goodness of its consequences, I exempt this statement itself from the scope of my definition. Otherwise, the truth of this statement itself would consist in the goodness of *its* consequences; and thus we have a further and prior statement about it, which must be true; and unless we somewhere admit a statement whose truth is something different from the goodness of its consequences, we are involved in an infinite regress, and can never get a real *judgment* at all.

Now Prof. James is "almost sure" that the authors of the "wider pragmatism" are right in their main contention—*viz.* (for the words are his, and not mine), "the notion that the truth of any statement *consists* in the consequences, and particularly in their being good consequences". He cannot mean that the truth of a statement consists in the consequences of its truth, or in the consequences of believing it true. Will he admit that he means that it consists in the

beneficial nature of the reaction to an idea considered as mere presentation, and not as being true or false? I own that I have sometimes suspected pragmatist writers of holding such a view; they show a tendency to reduce logic to psychology, and to apply the theories of evolution which thought has elaborated to the explanation of thought itself. Yet I cannot believe that Prof. James will admit such a definition of truth when nakedly presented; and if not, what does he understand by the main contention of the wider pragmatism?

Prof. James holds that pragmatism "owes its being to the breakdown which the last fifty years have brought about in the older notions of scientific truth". He seems to think that in altering our judgment of the truth of what the sciences teach we have altered our notion of what truth means. But that need not be so. He suggests that the new definition of truth is based on an induction; but such an induction would beg the question. Are we to suppose that, having discovered the truth of this or that statement to consist in the goodness of its consequences, we may then conclude the same of the truth of any statement? The inference presupposes logical truths whose nature is not to be submitted to the induction. But how are we to ascertain the particulars upon which the generalisation rests? Can experience show us that the truth of a particular statement consists in the goodness of its consequences? it can at most show us that the consequences are good. In experience we may rise to the use of a new conception; but experience can never show us what we mean by it.

Prof. James indeed speaks as if every conception was an hypothesis. He makes no distinction between such a conception as the ether, and categories without which thought would be altogether impossible. "The main forms of our thinking . . . are purely human habits." Is this true, or has he only a habit of thinking so? The position is familiar to readers of the last chapter of his *Principles of Psychology;* but in an article headed 'Humanism and Truth' we should expect the standpoint of Logic.

It is very difficult to make out how the forms of thought which have become habitual have been fixed. Two inconsistent conceptions appear to pervade the description given of the process. We sometimes hear of a "congruence between the world and the mind" (p. 459), of a "material" which experience gives us to digest (p. 460), and which, because conceptions are a *Denkmittel* enabling us "the better to foresee the course of our experiences," must be presumed to have

an order and existence of its own, which we have to guess at. According to this view, it should be the business of thought to correspond with fact; but Prof. James explicitly rejects the notion of truth as copying or corresponding, and puts forward in places the notion of a purely indeterminate experience, in which our 'hypotheses' had been developed.

This seems to imply a fusion of two psychological conceptions, both of them unfit to be taken as true in attacking the problem of knowledge. The one treats the "fundamental categories" of the mind as spontaneous variations, in the way of thinking, which have been perpetuated in the race because their use gave some advantage to their users, just as strength or speed might have done. This notion is perhaps helped out by the misplaced analogy of trying hypotheses, as it goes on every day among us all. But surely, if the "fundamental categories" are to be explained thus, we have no right to accept as true that conception of a world in which there are individuals who have to master their environment in order to live, which the explanation presupposes. It is itself a product of the use of these categories; and yet it is taken as true anteriorly to them. The "category of trans-perceptual reality is now one of the foundations of our life"; but apparently it might have been otherwise; and then what would have become of this account of the origin of our fundamental categories?

Prof. James will probably answer that the system with which our thoughts has to get into advantageous relations is no system of trans-perceptual reality but, as he calls it on page 470, "the ensemble of perceptions thought of as actual or possible". But the words "thought of" must be deleted, if we are speaking of a mere given material, to whose ways thought has yet to accommodate itself, or on which it has to react favourably; and then it becomes important to know whether a 'possible perception' is not, if anything, trans-perceptual. And it must be allowed, that if we try to regard our experience as a process in which perception and conception modify one another, going on all the time within the mind, if the hypothesis of a 'trans-perceptual' order in which we are placed is to be rejected, we must reject at the same time the conceptions of biological evolution. For different purposes it may be right and proper to suppose that we are in the world we know, and to suppose that the world we know is an ensemble of perceptions and conceptions in us; but in the investigation of an ultimate problem like the nature of truth it cannot be proper to combine those two standpoints.

The other psychological conception which seems implied in some of Prof. James's remarks is that which does attempt to dispense with the notion of a "trans-perceptual reality," accessible to us in perception, to which our interests require that we should adjust our behaviour, and in congruence with which lies the success, and therefore the truth, of the ways of thinking which we strike out. Instead of this, he conceives experience as the gradual elaboration of the chaotic. First comes "a most chaotic pure experience which sets us questions" (p. 461). I doubt if this chaotic state of consciousness ought to be called experience. But my more pressing difficulty is this. This most chaotic pure experience is supposed to be ours *before* we possess "the fundamental categories, long ago wrought into the structure of our consciousness and practically irreversible, which define the general frame within which answers must fall"; for their emergence is the second stage. Their secondary place is of the essence of the Professor's contention, since his whole point is, that the genius of the human race might have lit upon others, and that ours have no other claim to truth than the success which has attended their application to our chaotic pure experience. Now I do not understand how the latter can even put questions to a mind that is devoid of any 'fundamental categories'. Where there are no conditions of intelligibility, nothing presents a problem; every hypothesis which we make in order to render an experience more intelligible to us must fall within the general conditions of the thinkable; a mind which had no fundamental categories, and whose 'experience' was purely chaotic, would not be a mind at all. The stage at which fundamental categories, subsequently to become irreversible, first appeared would be the emergence of mind: and the suggestion that other categories might have emerged is a suggestion that something else than a mind might have emerged. For the nature of mind is expressed in the fundamental modes of its thinking; they define it, and for them to disappear is for mind to disappear. Unless indeed we are to be told there can be species of mind, as of brambles and starfish; but the very expression assumes that the conception of species and genus, which our species of mind employs, has a validity beyond the use which minds of our species make of it, and is applicable to minds universally. It seems as if Prof. James had been betrayed into the attempt to write a natural history of the mind by way of establishing the principles of thinking: yet he surely does not believe that you can swallow your head.

We are told (p. 468) that "those thoughts are true which

guide us to *beneficial interaction* with particulars as they occur". The conception of interaction here is obscure. My body may interact beneficially with a bath or a bun. But what is going to interact with a chaos of perceptions? Prof. James does not however believe that his chaos is a chaos; for its nature determines what conceptions we can beneficially entertain. There is "something in every experience which escapes our arbitrary control" (p. 463): "some questions, if we ever ask them, can only be answered in one way" (p. 464): "the circumpressure of experience itself . . . gets us sick of concrete errors" (p. 465). The first chaotic experience must after all therefore have a fixed and determinate character. I still do not understand what is meant by saying that our thoughts interact with it; it seems to me an unfortunate metaphor from physical science. But anything is better than interaction with a chaos. Only how is the circumpressure of experience, its determinate character which we cannot alter at will, to be reconciled with its chaotic nature? It will not do to say that it has become determinate through the "addition of our thought to it"; for it will not "suffer" every "addition" (p. 463), and so must have had some determinate character from the outset. Are we to distinguish between the facts, and our first impression of them? is the chaos a mere appearance which, when supplemented by the help of imagination, is found to admit of being interpreted as the appearance of an orderly world? Such a view accords with the notion of a "congruence between the world and the mind"; but elsewhere, as has been said, it is denied that truth resides in correspondence; and Prof. James does seem to think that the original chaos of experience is the original reality, which is altered by the 'reaction' of our thought, as any other reality is altered by what reacts with it. And yet it is suggested that experience is an "other" or a "*that*" which may have a "definite inner structure" not "resembling any of our predicated *whats*". It is a question, we are told (p. 462), which 'Humanism' leaves untouched, and therefore does not decide in the negative; though to entertain the possibility of an affirmative answer seems to throw Prof. James's theory back into a chaos like that of primitive experience.

I have assumed in the last paragraph that congruence between the world and the mind means what others have called correspondence; what Mr. Bradley, for example, calls correspondence when he says, in a passage quoted by Prof. James, that the thought "must correspond to a determinate being that it cannot be said to make". The conception of

truth as correspondence may be open to criticism; though it is hard to see how the "looseness" which the Professor finds in Mr. Bradley's phrase is improved upon by saying that we correspond with anything with which we enter into relations, and that a thought is true when a thing "suffers the addition of it" (p. 463). But it may be (and the passage just referred to suggests it) that Prof. James wishes to substitute for the specific and peculiar and no doubt the difficult notion of agreement between thought and reality another notion of congruence derived from different fields. One bone is congruent with another in a ball and socket joint, when it works easily in it; the shape of a flower is congruent with the insects that fertilise it, when such as to secure cross-fertilisation; in general, we may call the parts of a system congruent, when they are so adapted to each other as to produce a 'beneficial' result. That a pragmatist should attempt to find truth in a congruence of this kind seems sad, but not incredible. There is a curious hypothesis on page 467 which at any rate lends colour to the suspicion. "Let my reader suppose himself to constitute for a time all the reality there is in the universe, and then to receive the announcement that another being is to be created who shall know him truly. How will he represent the knowing in advance? What will he hope it to be? I doubt extremely whether it could even occur to him to fancy it as a mere copying. Of what use to him would an imperfect second edition of himself in the newcomer's interior be? It would seem pure waste of a propitious opportunity. The demand would more probably be for something absolutely new. The reader would conceive the knowing humanistically, 'the new comer,' he would say, '*must take account of my presence by reacting on it such a way that good would accrue to us both.* If copying be requisite to that end, let there be copying; otherwise not.' The essence in any case would not be the copying, but the enrichment of the previous world."

I have ventured to quote this passage at length, because it is perhaps the most surprising in the article. We are not told what good is; and in the absence of that information it is a little hard to be sure what the clause in italics (not mine) means: especially when we consider how few modes of "reaction" are conceivable between a being who "constitutes for a time all the reality there is in the universe" and another supervening. But the hypothesis is too extravagant to be interpreted very rigidly; and we may suppose that if the second comer by his presence were to heighten the pleasure that I had previously taken in my own existence, and

to have the pleasure which he took in his existence heightened in return, the reaction would be such that good accrued to both. Would it therefore be knowledge on his part of me? does the west wind know me, when I am refreshed by it? did the Lady of Tripoli know Rudel because the thought of her inspired him? It may be said that the profit must be mutual: but there is nothing in the passage to show why this should be requisite. If we are really to adopt the truly extraordinary proposal of supposing that another's knowledge of me is what I should like instead of it—for nothing else is implied, when we try to determine what knowledge is, by asking what a man would hope it to be—then it need not involve good to the knower, for I need only hope his knowledge of me to be something from which good would accrue to me. And let us grant that good must accrue to both. Does the bee know the flower which is fertilised while it yields him honey? It may be better for the bee to get honey than knowledge; but is it therefore knowledge to get honey? Let it be said that the flower is unconscious of the benefit that it obtains; and that the good must be a good for the consciousness of both parties to the "reaction". Suppose then that the flower thrilled with pleasure in being fertilised, as the bee perhaps does in sucking honey: would that constitute knowledge of the bee in the flower, and of the flower in the bee? Pleasure may be better than knowledge; but it is as absurd to say that it *is* knowledge as to say with Mill that the simultaneous suggestion of an indefinite number of series of tactual and muscular sensations *is* the apprehension of space. Prof. James has indeed relieved the paradox of his illustration by supposing the reader to *know* himself and the new-comer, apart from any beneficial interaction, although it is still in question what knowledge is. But let us try to apply the results of the investigation on behalf of which his hypothesis is made to the terms of the hypothesis itself. Knowledge of A by B turns out to mean a reaction of B on A from which good accrues to both. What then is the knowledge of B by A, while A is still hoping that B's knowledge of him will be something that will do him good?

The question whether knowledge is good is one thing: the question what it is is another. Pragmatism seems to have passed from saying that there are better relations than knowledge to saying that relations which bring good are knowledge. The change bears testimony to an obstinate conviction that knowledge must be good; and we may grant that a philosophy which fails to show this leaves us with a speculative problem unsolved. Let us return for a moment

to the reader solitary in his existence; if another person supervened, it is hard to see what 'reaction' would bring them greater good than an intercourse of consciousness, knowing and being known. But this mutual knowledge is good, because it is mutual knowledge; if we attempt to explain what is meant in calling it knowledge by saying that it enures to mutual good, our language collapses into insignificance.

Prof. James is indignant that it should be supposed impossible for the pragmatist to recognise a duty to think truly. But in rejoinder he falls back upon feeling. There is a "felt grain inside of our experience" (p. 465), and that seems to him sufficient. He does not see that his opponent wishes to distinguish between a psychological compulsion that drives you to think in a certain way, and a logical recognition that you ought to think in that way, and that others ought to, whether psychologically they are compelled to or not. Or if he sees it, he holds the distinction wrong, and would say that what you are compelled to think, that you ought to think, and therein lies truth for you. Such a doctrine is like the hydra, whose heads spring up again as fast as you destroy them. For when I urge that by truth I mean something which all ought to think, and not what any one is psychologically compelled to think, he will reply that I am psychologically compelled to mean that by truth, and that is all that the truth of my view amounts to. Shall it be retorted that his view is only what *he* finds himself thinking under a psychological compulsion, the view which makes life seem best to him? The retort will not penetrate the armour of a philosopher who acknowledges that that is what he means by truth.

But when it is doubted, 'How can any one be enthusiastic over such a view?' we get a strange answer. We are first bidden to "follow the pragmatic method and ask, What is truth *known as?*"—a question which would seem futile in the mouth of any one who is still trying to find out what truth is. But we are immediately told that it is the opposite of the instable, the practically disappointing, the useless, the lying and unreliable, the unverifiable and unsupported, the inconsistent and contradictory, the artificial and eccentric, the unreal in the sense of being of no practical account (p. 466). Part of this answer is useless (and therefore on pragmatist principles untrue); for to define truth as the opposite of the lying and unreliable is to define in a circle. That it is the opposite of the unverifiable is inconsistent with the admission that the Other may have a definite inner

structure not resembling any of our predicated Whats, but that we cannot tell whether this is the case or not. That it is the opposite of the practically disappointing many know to their cost is not the case. That it is the opposite of the unstable can hardly be reconciled with the view expressed on page 471, that "at each and every concrete moment, truth for each man is what that man 'troweth' with the maximum of satisfaction to himself"; for the "long-run satisfactoriness" which is the criterion of "truth verified by the long-run" cannot give the trower's last trowing any prerogative over trowings that have gone before. That it is the opposite of the inconsistent and contradictory, the artificial and eccentric, I have no wish to dispute. When I am told that it is the opposite of what is of no practical account, I am moved to ask for a definition of the practical.

A true idea is said to have been originally one that prepares us for an actual perception (p. 470); and I suppose it was then practical, because it was to our practical 'interest' to be prepared for the perception. But "it is obvious that, although interests strictly practical have been the original starting point of our search for true phenomenal descriptions, yet an intrinsic interest in the bare describing function has grown up. We wish accounts that shall be true, whether they bring collateral profit or not." By collateral profit must be meant profit beyond their truth; but if truth consists in promoting some other interest, how *can* an account be true that brings no collateral profit? and if it cannot be so, what is the use of wishing it? or it is again suggested that truth may be what we hope or wish it to be, and that since we have a practical interest in supposing that accounts *may* be true which bring no collateral profit, because we "wish accounts that shall be" so, therefore the opinion that they can be so is a true opinion? However this may be, Prof. James recognises the emergence of a "theoretic curiosity," which at its first appearance it is plain he distinguishes from "practical" interests. If this theoretic curiosity is not a practical interest, then so long as the true is what satisfies a practical interest, nothing can be true merely by satisfying a theoretic curiosity. Yet he clearly thinks that it can be. "Trilobites were once alive, or all our thought about the strata is at sea. Radium, discovered only yesterday, must always have existed, or its analogy with other natural elements, which are permanent, fails. In all this, it is but one portion of our beliefs reacting on another so as to yield the most satisfactory total state of mind. That state of mind, we say, sees truth" (p. 471). In other words, a judg-

ment is true, not because the assumption of its truth produces any 'practical' benefit, but because it satisfies "a theoretic need".

It will not do to say that, if it gives satisfaction, it does make a practical difference, and is true because it does us good. For, first, it is admitted that "we wish accounts that shall be true, whether they bring collateral profit or not"; the satisfaction is only a collateral profit; if the judgment were only true *because* it gave satisfaction, it would not be what we wish for, and therefore would not give the satisfaction. Just as the pleasure of a good conscience cannot be obtained by doing right for the sake of the pleasure, so the satisfaction of discovering the truth cannot be obtained by taking anything to be true that gives you satisfaction: unless indeed you say that it must satisfy you intellectually; but that only means that it must appear true. Again, a man who desires to know the truth, and feels satisfaction to-day in the belief that he has found it, may discover to-morrow that he was mistaken; he therefore cannot identify the true with what gives him satisfaction, or accept Prof. James's theory. Yet a theory of truth has little to commend it, if it cannot be accepted by those who "wish accounts that shall be true, whether they bring collateral profit or not". If Prof. James replies that it was never true because it did not bring satisfaction on the morrow, he ought to tell us how we are ever to know that any account is true which brings us satisfaction in the present. If he says that it was true so long as it gave satisfaction, I could only wonder that he had called truth the opposite of the unstable, and go on to ask whom it must satisfy. And once more, there are speculative questions, to which, whether the true answer were found to be negative or affirmative, it would make no 'practical' difference. According to Mr. Peirce (whose opinion Prof. James endorses) such questions must be unmeaning. Yet we may have a theoretic need to find the answer. Can we need an answer to an unmeaning question? And either answer will give equal satisfaction, just because it is the true answer. How then can its truth consist in its power to satisfy? For each answer has an equal power to satisfy, if it be found to be truth; and that means that the satisfaction presupposes the discovery of the truth, and does not constitute it.

The sudden introduction of a reference to our theoretic needs only serves therefore to reveal the bankruptcy of the theory which can neither be made consistent with it nor get on without it. And this appears very clearly in the para-

graphs in which Prof. James recapitulates, on page 474, what he conceives the main points of 'Humanism,' to be. The first is, "An experience, perceptual or conceptual, must conform to reality in order to be true". The next two explain 'reality' and 'conforming'. Substituting for these terms in the first paragraph the definitions given of them in the second and third, we get this dictum: "An experience, perceptual or conceptual, must, in order to be true, take account of the other conceptual or perceptual experiences, with which it may find itself in point of fact mixed up, in such a way as to gain an intellectually and practically satisfactory result". I should like to know what is meant here by 'taking account of'; but Prof. James forestalls any intrusive curiosity on that point by giving it as the next "main point of humanism," that the term cannot be defined—"so many are the ways in which" this requirement "can practically be worked out". I will therefore only ask what is meant by the words "intellectually and practically satisfactory". Are there two different standards of truth? and if so, what is to happen when they conflict? or is it meant that nothing can be true which is not both intellectually and practically satisfactory? If so, how can it be that "interests strictly practical have been the original starting point of our search for true phenomenal descriptions"? While the need for intellectual satisfaction was yet unborn, nothing could be or be conceived to be intellectually satisfactory. Nothing therefore could be or be conceived to be true; and the original starting point of our search for the true was furnished by a state of things in which truth was neither born nor thought of. Thus the assertion that truth must be both intellectually and practically satisfactory contradicts the previous assertion that it is originally the practically satisfactory only. It also leads to the paradox of saying that what is intellectually satisfactory is untrue if it does not help us practically. Yet the doctor, puzzled by his own symptoms, would obtain intellectual satisfaction in the discovery that he was suffering from a swift and fatal disease, although the discovery might render him weak and miserable, and even accelerate the action of the disease. Was his discovery therefore not true? and if Prof. James has the courage to say that, will he have the further courage to say that in such a case therefore the doctor would not die of the disease? Or lastly, will he say that such a discovery is not intellectually *satisfactory?* I should welcome that answer also; for it would show that by 'intellectually satisfactory' he means pleasant; and it would give me some intellectual satisfaction to discover his meaning, though I am afraid he

might say that my discovery was not true unless it also did me some practical good.

Prof. James says that he condemns "all noble, clean-cut, fixed, eternal, rational, temple-like, systems of philosophy". "They seem," he adds, "oddly personal and artificial" (p. 166); though that they are personal might be expected to be taken by a pragmatist as showing, that they respond to the needs of their authors in the way that is constitutive of truth. I hope I shall not seem guilty of disrespect in confessing that, though I recognise the temper of his article to be quite admirable, I cannot agree that a system of philosophy ought not to be rational.

IV.—APPLIED AXIOMS.

By Alfred Sidgwick.

As an excuse for writing on so ancient a subject as the respect which is properly due to 'undeniable truths,' a modern instance will be useful as showing that in spite of the antiquity of the problem its solution is still a little obscure. Such an instance is provided by Dr. McTaggart's reply[1] to Mr. Schiller's attack[2] on a line of argument which at present enjoys considerable vogue among philosophers.

The 'undeniable truth' there criticised is the Law of Contradiction, and the point of the criticism consists in questioning not the undeniability of the law but the assumption that when used as a ground of argument its undeniability remains intact. Mr. Schiller's position—which in general is that of Pragmatism—involves a thorough-going distrust of the well-known argument that because the best account that can be given in words of processes like Change and Causation contradicts itself, therefore the processes in question are not real. Against this it is maintained that a contradiction is something that may always be due to the unavoidable defects of language, and of thought in so far as its structure is the same as language,—that is to say, in so far as thought depends upon antithesis; and that therefore the actuality of anything must be judged on other grounds than that of our power of explaining its nature in words; and that where we are compelled for all practical purposes to recognise that a thing or a process is actual, no verbal argument to show that it is impossible has any standing-ground.[3]

[1] *Studies in Hegelian Dialectic*, pp. 110-113.

[2] Republished in *Humanism*, essay vi. See also *ibid.*, pp. 185-187.

[3] To this it may be added that, when once it is admitted that the Law of Contradiction (used as major premiss) cannot be true unless Change is an illusion, it becomes mere question-begging to attempt to prove the illusoriness of Change by assuming the *necessary* truth of the Law of Contradiction in such use. A major premiss can only be called 'unquestionable' by courtesy or exaggeration. To avoid question-begging it must be put forward as open to question.

Dr. McTaggart's contention, on the other hand, is that the reasoning just quoted only holds good if we assume that sensation apart from thought can assure us of reality; and that since nothing can make us aware of reality without thought, any law that can be laid down for thought must be a law that imposes itself on all reality which we can either know or imagine. And, finally, that to predicate reality of a thing whose notion is self-contradictory is to put an end to all possibility of coherent thought anywhere; for if a contradiction is not taken to be a sign of error it will be impossible to make any inferences at all.

What is chiefly interesting in this answer is that it belongs to the time before the distinction between an undeniable law and an undeniable major premiss (or *use* of an undeniable law) had come into notice,—which distinction is involved in Pragmatism. From that former point of view it is natural enough to assume that the only way of objecting to an argument based on the Law of Contradiction is by totally denying the validity of thought and putting mere thoughtless sensation in its place. It is through that assumption that the matter presents itself to Dr. McTaggart as a perfectly simple dilemma. You must either, he thinks, accept or deny the Law of Contradiction; if you accept it, then you are free to use it as a major premiss wherever you please; and if you deny it, then you are talking nonsense. But as soon as we see that it is quite possible to refuse to accept a general rule when used as a major premiss, even though apart from such use we may find no fault with it, this dilemma no longer holds good. There are four alternatives theoretically possible, instead of only two. We may accept or deny the rule regarded as a major premiss, and we may accept or deny it in its other and more ethereal sense. Practically the last of these four alternatives—that of denying the abstract axiom—happens not to commend itself to anybody; we are all content, I believe, to agree that the abstract axiom is undeniable. But what the Pragmatist would maintain is that this admission says nothing at all about the axiom regarded as a major premiss. He contends that when it is so regarded—when it is taken as an 'applicable' law instead of an abstract one—its truth may be denied without talking nonsense; and that the undeniability of what Dr. McTaggart loosely calls "the Law of Contradiction" can only be supported by confusing the applicable law with the abstract one.

Really it would be a very simple matter to upset this position of ours,—if the facts would only allow of it. All that is necessary would be either to explain in what way the

applicable Law of Contradiction can be regarded as universally true, or else to give some reason for condemning as illusory our distinction between the abstract law and the applicable one. Meanwhile I will try to state some of the reasons supporting our side of the question. The fact that here we have a definite instance of a philosopher who rejects our point of view, without appearing to understand what it is, will serve as my excuse for saying some things that might otherwise seem rather too obvious.

First as to the exact point in dispute. What we object to is *not* the admission that a contradiction is something that should if possible be removed, or even something that until removed destroys the meaning of an assertion; but to the assumption that it is an infallible mark of error. A contradiction we regard as in itself a mere fault in expression,—a purely verbal affair; we admit that, like other such faults, it may be due sometimes to carelessness, or again to a piecemeal and therefore erroneous way of regarding a complicated set of facts; but we recognise that it may also be sometimes due to the unavoidable clumsiness of language and of antithetical thought. And, if it makes our position any clearer, we should be quite content to deny the practical importance, rather than the truth, of the rule that a contradiction is a sign of error. To deny the practical importance of a rule is the same as to deny the truth of that rule regarded as applicable—regarded as a major premiss and used in supporting conclusions—though it naturally says nothing about the truth of the rule outside such use. Whether indeed there can be anything worth calling truth in a general rule that admittedly cannot be used as a major premiss is one of the chief points at issue between the pragmatist and other people. And so our opponents do not meet our objection—they only ignore it and seek to beg the question at issue—when they talk about the undeniability of the abstract rule. We may freely admit its undeniability and yet draw a distinction between undeniability and truth, since a meaningless statement is just as undeniable[1] as a true one. We contend that the use of a general rule, and the power of testing its truth, both

[1] When this paper was read to the Oxford Philosophical Society the suggestion was made by one member that only true statements deserve to be called 'undeniable,' though meaningless ones may be admitted to be 'not deniable'. The difference escapes me altogether, and I do not think this use of the words has even an established convention behind it. If, however, this were so, the only effect of accepting the convention would be a verbal one. The pragmatist would still be able to agree with other people in *denying the deniability* of the abstract axiom.

depend on the same condition—that it shall be applicable in particular cases and so run a risk of being proved false.

As to our reason for denying that you can safely proceed to infer real error from verbal contradiction, it consists in the fact that any pair of statements which appear contradictory may represent assertions which are really compatible,—the reason for this being that all statements are elliptical and thus run a risk of being ambiguous. If we are right, therefore, the applicable Law of Contradiction can only be taken as universally true when we forget that any statement, however elaborate, may stand in need of further limiting. We should have to assume—exactly in the manner of the most thoughtless Formal Logic—that the risk of ambiguity in a predicate term is a risk that may be ignored. For in so far as the existence of an ambiguity in the statement 'A is B' can come as a surprise to a given person, that person at that stage of his acquaintance with the term B cannot safely apply the Law of Contradiction to the statement. Before the ambiguity is seen by him he is bound by the Law of Contradiction to suppose that because A is B the statement 'A is not B' must be false; and therefore the more confidently he applies the law, the more he shuts himself out from learning in what respects (or in what contexts) B is an ambiguous term.

It is possible to predict some of the rejoinders that are likely to be made. And what I am anxious to find, but have never yet found, is one that possesses any relevance. Since we all agree that the Law of Contradiction—that is to say the abstract law—is not deniable, and since our objection extends only to the supposed universal truth of the applicable law, many of the usual defences are quite beside the point. At the root of them, generally, I suppose, is the fear that any tampering with the law must result in anarchy or deadlock; and I think we are bound, on our part, to do what we can to allay that fear before we consider the more special points that are sometimes raised.

In an earlier passage of McTaggart's book (p. 9) where he defends Hegel against the charge of denying the Law of Contradiction, he has in view two kinds of such denial, one rather less extreme than the other. The extreme form he refers to is that of asserting that a contradiction, instead of being a mark of error, is a mark of truth. This we really need not here consider, since (whatever may have been at times supposed about Hegel) no one is likely to suspect the Pragmatist of wanting to defend the contrary of the Law of Contradiction; our ambition plainly does not extend to the

finding of any permanently unambiguous axiom. It is only the supposed universality of the law that is attacked; and therefore we need consider only the milder of the two kinds of denial contemplated by McTaggart—that of proposing (as he puts it) 'to do without the help of the law'. As to this he quite rightly says—what others have often said before him—that then we should be unable to refute any proposition. And we can admit this freely, for the simple reason that we do not propose to do without the help of the law. What we propose is to use it, as so many other general rules are constantly used, with a mental reservation as to its universal truth when applied. It is a mere assumption that this kind of double dealing is impossible,—an assumption which, no doubt, comes very naturally to those who desire to obtain a complete metaphysical system secured against all risk of refutation by an unforeseen course of events. The assumption, however, runs counter not only to the chief part of our daily experience of thinking, and of correcting our thoughts in the act of their growth, but also to the whole method of science. In science, just as in ordinary life, we are in the constant habit of using laws which we know to be not quite beyond improvement. In fact, the better the science is the more it admits this eternal need of correction. Science draws particular conclusions by means of its general rules, but it also recognises that the conclusions—and the rules they depend on—remain open to criticism. And if any defender of the Law of Contradiction will allow us to use that law in the same way we should have no further quarrel with him. But then he must extend this admission of possible error to his own metaphysical conclusions, however clearly he can demonstrate their truth in words.

Another form of the same defence is that to doubt the universality of the Law of Contradiction leaves us without any reason for condemning inconsistency. In answer to this we should distinguish between merely careless (or worse) inconsistency and the kind that is justified by the known defects of language and of antithetical thought. Against careless inconsistency our provisional use of the Law of Contradiction would be just as effective as any less cautious use of the law could be, while the other kind of inconsistency (we should maintain) is something that needs to be encouraged and not forbidden. There is no merit in misunderstanding the course of Nature through an over-regulated effort to understand it. In the same way there is no merit in falling short of the best kind of conduct through a rigid adherence to restrictive principles.

Another defence sometimes met with is that we have no business to blame a rule merely because it is often misapplied. This is, I think, an interesting kind of defence, involving more subtlety than those already noticed. It raises, in a pointed way, a difficulty which is of common enough occurrence in a dispute,—that of deciding whether a rule is itself defective, or only seems so through a wrong interpretation having been put upon it. Every one would admit that, for example, a rule intended to state a *tendency* is not to be blamed if some one applies it without taking the saving clause into account. Nor, again, need an Act of Parliament be condemned because this or that person interprets it wrongly. But the line is exceedingly hard to draw between a rule that is misapplied merely through the fault of the person applying it, and one that even by its own most careful expression contributes to the mistake. That is the charge we bring against the Law of Contradiction. State the law as you will, it remains impossible to apply securely to statements in general. There is no way of making sure *a priori* that in a given context a given predicate is not ambiguous, since we can only see that it is ambiguous after we have attempted to verify it and so have discovered the ambiguity. We can only be wise, that is, after the event that shows our previous lack of wisdom.

This point was briefly noticed above,[1] but perhaps needs a little further expansion. The difficulty of it lies in the fact that whenever an ambiguous predicate interferes with the Law of Contradiction, the state of things before and after the ambiguity comes clearly into view is different. Before the discovery of the two meanings in the predicate B, the admission that A is both B and not B necessarily seems to be a breach of the law; while directly we can admit that A is literally B but virtually not B, or broadly and generally B but for a special purpose not B, all talk of a breach of the Law of Contradiction is at an end. Thus a breach of the Law of Contradiction insensibly passes into a case where there is no such breach (and by the way this change, like any other, is itself an example of the defect of the law). If we prevent ourselves from admitting the possibility that the Law of Contradiction can ever deceive us in application we are thereby at least hindered in discovering a hidden conflict between a literal and a virtual truth. And the virtual truth of a literal untruth is a thing that often reaches our understanding slowly at the best,—just as when a nearer approach corrects our first impression about a distant

[1] P. 45.

object. So that it is not always a simple matter to make sure that an apparent contradiction is not a real one. We often have to wait for that piece of wisdom until time and trouble, and the habit of expecting such mistakes, have brought us nearer to the facts in question. Ignorance of the defects of the applicable Law of Contradiction stands in the way of our forming that habit.

That is how I should answer the objection that since the Law of Contradiction is supposed to apply only to predicates taken in the same sense, a conflict between literal and virtual truth cannot illustrate a breach of the law. In the abstract it cannot, but in any actual case it can. The Law of Contradiction has, no doubt, the most excellent intentions. It *means* to refer only to unambiguous predicates. But then it cannot guarantee its own correct application. If it pretends that no predicate can ever be ambiguous, it lives in a fools' paradise. As things are, an unrecognised conflict between a literal and a virtual truth is only too frequent. The risk of ambiguity pervades all statement of fact, and wherever the ambiguity becomes actual without being seen, the good intentions of the Law of Contradiction are defeated. And our contention is not only that such cases are far more frequent than is generally supposed, but also that they have in two ways a peculiar importance: they arise chiefly at the point at which old knowledge is modified by new, or broad and rather abstract views by special and concrete facts; and the region of their greatest effectiveness is in disputes which are least easily settled, where the balance between the opposed views is most difficult to overcome. Just in that region where landmarks are changing, and where the changing landmarks seriously confuse our view of the truth, obstinacy in appealing to the Law of Contradiction as a ground of argument tends to bar out the chance of progress and of harmonising the dispute.

The mere number and frequency of these cases is considerable, since the change of a possible into an actual ambiguity occurs wherever any important detail in a fact is overlooked or ignored in its description or conception. A given fact is described as B when (if a certain detail had been taken into account) it would have been seen to be virtually a case of non-B. The description B is thus correct in the absence of more detailed knowledge, but incorrect in its presence. This piece of progress in knowledge therefore makes a correct description incorrect; and reversely, the habit of supposing that a correct description cannot be incorrect stands in the way of the particular piece of progress.

Perhaps the clearest examples are those where the detail overlooked is one that is growing in importance, and where there is a sufficient interval during which its growth is not much noticed and its existence is rightly kept out of sight. But the growth must not be too slow, else language accommodates itself to the new state of things and no mistakes are made. If an Alpine lake gets silted up with glacier mud in 100,000 years, and becomes first a swamp and then a fertile valley, no one is likely to misdescribe it much during the process ; and even when a village or a suburb—like Kensington or Chelsea—is ceasing to be a village or a suburb, and is becoming virtually a part of the town, the people whom the old description would mislead may not be very numerous. Still, that is not always so. Seeley, in the *Expansion of England*, notices an interesting case where an old conception of fact has actually survived its justification for a considerable time, so as to produce an important confusion of thought. In the seventeenth and eighteenth centuries the distance of our colonies from the mother country was a determining factor in the notions we had about them. The sea *divided* us from them—before cables and steamers came into use—and therefore it was natural that we should not think of colonies as parts of our country (like Kent or Cornwall) but rather as appendages to it—'possessions'. The decay of this idea, Seeley points out (writing in 1883), has not kept pace with the rapid decrease in the difficulties of communication. Hence the virtual truth of the matter was obscured—and perhaps it still is so to some extent—by the old forms of expression and the old habits of thought.

But there is no reason to restrict our examples to this kind of situation, where the not-B element in a case of so-called B is properly negligible at one stage and gradually grows in importance. A conflict between literal and virtual truth may be obscure for other reasons beside the fact of slow change or development. It seems better to connect it with the whole problem of ambiguity—that is to say, with the difficulty of applying general names so as to give due weight also to individual peculiarities which are important. Since there is no way of asserting or conceiving any fact except in general names that describe it, and since every fact nevertheless has its own individual peculiarities, all statement or conception of fact is elliptical and therefore liable to suffer through making important omissions. And in so far as the mistake is a plausible one, the correction of it involves (till it is accepted) an apparent breach of the Law of Contradiction, and therefore is hindered by our rigid adherence to that law.

If we take any examples of this extremely common situation—where an important detail is hidden by a general name—we shall find, I think, that the difficulty of viewing them as cases where the Law of Contradiction has to be disregarded arises partly from the change in our point of view *after* the literal and the virtual truth have been disentangled, and partly from the fact that in ordinary life, and even in science, no express reference is usually made to the Law of Contradiction. Except in philosophical writing of a particular kind the axiom is hardly ever expressly mentioned. The man who discovers the importance of a detail which might have been discovered sooner finds it more natural to mention the detail itself; and as soon as he proves its existence, and its importance, the virtual truth at once conquers all verbal obstacles. There is rather a good instance which I have had occasion to quote in another connexion,[1] where some experimental cases reasonably supposed to be cases of splenic fever infection were afterwards unexpectedly found to have been complicated with another kind of infection so rapid in its effects that the splenic fever germs had not time to get to work, and so appeared to be inoperative. The overlooked difference turned upon the fact that the blood used for the experiments was not quite fresh, having been taken twenty-four hours after the death of the animal. These *were* cases of splenic fever infection, and yet in view of the particular experiments they were not so. Literally they were B, and virtually they were not B. Here the axiom that if a disease is a particular kind of fever it is *not* another (different) kind may have had its effect in delaying the discovery, but was naturally not referred to, and therefore not disputed. As soon as the existence and importance of the detail became clear, it was seen that actual splenic fever infection ceases to be virtual splenic fever infection after the lapse of twenty-four hours.

The overlooking of important details in describing or conceiving a fact is really too common an experience to need further illustration. But if we want examples that are concise, and sharply pointed, and easy to follow, we can get them best from detective stories. Such stories, with their inevitable conflict between a theory formed by the regular police and a theory formed by a gifted amateur with an eye for peculiar details, always illustrate the value of doubting whether a thing that may be correctly described as B may not also be called an unusual kind of non-B; and the conflict is typical of all careful and subtle inquiry into facts and their best description.

[1] *Process of Argument*, p. 95.

Take, for example, Poe's tale of the murders in the Rue Morgue, where the investigation, at one stage, turns upon the point about the fastening of the back windows. The police examined them and found that they were firmly nailed down from inside. There, full in view, were the nails that were driven through the frames of the windows. With some excuse the police concluded that the murderer did not escape that way. Then the amateur detective comes on the scene, and examines the facts more carefully. He finds that while one window (which the police had tried to open) was securely nailed down, the nail in the other had been broken off at some time, leaving the head in the frame. The police took their observed fact as a 'nailed-up window'. For some purposes[1]—or at least, apart from the purpose of opening the window—that was a correct description; the window had actually been nailed up, and the nail had never been withdrawn. What made the description importantly incorrect was an individual peculiarity belonging to this case as contrasted with the class of 'nailed-up windows' generally. The police took the responsibility of assuming that none of the special details of the case were of a kind to make the general description virtually incorrect. For them the loose and general predicate B stood in the way of the virtually truer predicate non-B.

Artificially invented points of this kind may at any rate serve to remind us of many similar incidents in our own less dramatic experience. They help us to remember many less striking and less definitely pointed cases where, through the overlooking of some detail either in the fact itself or in what are loosely called its surroundings, the fact (or state of things) has a good apparent right to the name B, and also a better though less apparent right to the name non-B—cases where the fact is B on the surface, or regarded in a broad and general way, and not B when regarded more closely or with a special purpose in view. In all such cases, unless the Law of Contradiction happens to be expressly mentioned its defects do not come naturally into sight. And when the two kinds of meaning have been clearly distinguished the difficulty exists no longer and there is nothing to show that the law has played us false in its application. Nevertheless the Law of Contradiction, applied in the only way it can be applied *before* the new knowledge comes to hand, is a misleading influence. It fights on the sight of prejudice, and delays the advent of the clearer and fuller view of the facts.

[1] *E.g.*, for the purpose of noticing the damage done by a tenant.

Common sense, no doubt, often makes light of verbal contradiction and so rushes in where philosophers fear to tread. Still, it does seem more businesslike (and therefore also more truly philosophical) not to entrust the over-riding of this kind of wordy prejudice to our rather uncertain impulses of common sense, but to admit in our Logic and Philosophy the need of keeping a clear course open for doing so. At present, however, the risk of misapplying the Law of Contradiction escapes the notice of some of our most ambitious philosophers. In this respect they seem hardly to have advanced beyond the simple-minded assumptions of the merest Formal Logic. With perfect confidence they assume that a verbal contradiction is an unmistakable sign of real error, and that no further justification is needed for condemning as illusory all the notions that have most abundantly proved their practical value. Conceivably some such criticism of fundamental notions might be undertaken for the sake of improving their usefulness in managing our lives. Take Causation, for example. Even the verbal puzzle about A changing into B would have importance if the moral to be drawn from it were that our notion of the essential elements in a sequence is liable to be vitiated by the drawing of a hard line between antecedent and consequent, and between the whole event and its surroundings. If what we call A is really a little more B than we think it, we naturally make mistakes in foreseeing the line of its development; and merely to be reminded of this possibility—especially in connexion with actual examples—would have, no doubt, some practical value. But unfortunately that is the last thing that this kind of philosopher desires. Everything practical is, for him, a "mere makeshift," and he won't be happy till he gets outside the domain of practice altogether; in other words, out of the region in which his symbols have to be verified in order to mean anything. His whole speculation, in consequence, takes on the character of an ingenious but trivial game, played under rules laid down by verbal axioms which are only safe from criticism when they are subjected to no tests and interpreted as having no bearing on any mundane facts.

The particular example I started with has perhaps drawn us into a good deal of disputable matter on its own account. But exactly the same disputable matter belongs also to the wider question how far and in what manner the defect here imputed to the Law of Contradiction should be recognised in other general rules as well. I have only taken the Law

of Contradiction as a notable instance of a whole class of general rules—those where it is possible to delude ourselves by the undeniability of the rule regarded otherwise than as a major premiss. Whenever a rule can thus claim axiomatic value the defect in question attaches to it. Our contention is that no clear distinction can be made between the defects that really belong to a rule and those that falsely appear to belong to it because it is misapplied. Some way this distinction will carry us, but not quite far enough. There seems to be no clearly distinctive feature of careless or faulty interpretation as contrasted with interpretation which is unfortunate through no one's fault. For since all general rules —even axioms—are liable to unforeseen ambiguity therefore any particular misinterpretation of a rule may be one of those accidents that will happen even in the best regulated kinds of thought. In such cases we do not seem to gain anything by maintaining that the rule *in itself* is not defective, for nobody can tell (except negatively) what this 'rule in itself' may be—the rule regarded apart from all application. Such a defence is really no defence at all. It is either an empty, resultless courtesy paid to the rule, or else its result must be to make us treat the risk of misinterpretation lightly.

The way in which this kind of defence of a rule misleads us is by restricting our notion of what makes a rule defective, so as to leave out of account the subtlest and therefore most troublesome source of error in the use of rules. Assuming that it is important to know exactly how far a given rule may be trusted—and that assumption is, I suppose, involved in all attempts to make our inferences correct—it seems to follow that we ought to get as far as possible from an optimistic or happy-go-lucky view of the risks; that we ought not to be content with calling a rule defective only in so far as we can already see ways of improving its statement, but rather to recognise that the worst defects are those that no improvement of statement can ever remedy,—those that are inherent in the applicable rule however we try to guard against them. Mistakes of application are then chargeable to the rule itself; or at any rate if the actual mistakes may be charged against the individuals who make them, the general risk is something that affects not this or that particular application but all applications alike. The only general account of misapplications is that they are *facilitated* by a rigid belief in the universal truth of the rule, while this in its turn is facilitated by confusing the applicable with the abstract rule. Be an axiom never so axiomatic it has got to contemplate being applied,

or else gives up its claims to a meaning. And to contemplate being applied involves either the contemplation or else the ignoring of the risks of wrong application.

In this connexion it may be asked what is our attitude towards mathematical axioms. They are not, I should say, an exception to the rule that all rules exist only to be used as major premisses and were originally discovered with that purpose more or less dimly in view. But our opponents may grant this and still insist on asking whether, in our opinion, mathematical axioms are, like other general rules, open to question when applied. Our opponents may contend that it would be folly or perversity to call (*e.g.*) the multiplication table questionable. When we make a mistake in addition—even the kind of mistake that is likely in counting infusoria while they are in process of division—we blame our *minor* premiss as a matter of course. Though the apparently one and the apparently one may make some other number than two, we at once in such cases admit our observation to have been at fault. Here, then, the opponents may say, is a considerable class of abstract truths used as major premisses and yet quite beyond our power to question. If so, what becomes of our argument against using the abstract axioms of Logic with the same entire conviction of their truth?

I confess to having only the vaguest ideas as to the present or future possibility of questioning the truth of the mathematical axioms otherwise than idly. It is for those who are able to find, or to foresee, the faults of them to show what value such researches may have. But even a person thus ignorant of mathematics may, without venturing out of his depth, deal with the argument that if mathematical axioms are admitted to be abstract and also true and useful as major premisses, the ground of our objection against the abstract logical axioms disappears. This argument is irrelevant in two respects. In the first place the defect of the abstract logical axioms, as explained above, does not consist in their abstractness *per se*, but in their abstractness relatively to their only possible applications; the logical axioms (when universally true) refer to *assertions* while their only application is to *sentences*. But when we apply (*e.g.*) the multiplication table, though the laws of number are always admitted to be abstract the numbers counted are also always admitted to be only one aspect of the particular facts in which the numbers are found. Behind an inference resting on an appeal to arithmetical principles there is always implied the saving clause 'so far as these are numbers'—which includes

both the proviso 'if I have counted as I intended' (*i.e.* correctly) and the proviso 'if the laws of number are applicable to the subject'. And where do we find any similar safeguards in the application of logical axioms? Only where the conclusion is held tentatively or at least with a full consciousness of the risk of identifying sentence with assertion; only, for example, where the confident use of the Law of Contradiction to rule out inquiry has been most carefully avoided.

In the second place, if it be the fact—as we need not mind assuming provisionally—that no present or future application of a particular mathematical axiom will ever force us to reconsider and revise it, all we can say is, So much the better for that remarkably wary and farsighted axiom. Still the prophecy is gratuitous, and may be wrong. There is no great harm in a generous, or even a sanguine, recognition of an axiom as true, so long as we reserve to ourselves the power of testing its truth in particular applications. The harm only begins when, in order to apply the axiom for the sake of drawing a conclusion from it, we slur over the question whether as so applied it is true. And our argument about the logical axioms is not affected by the superiority of the mathematical ones—if they are superior[1]—in resisting this misuse. We have seen, anyhow, that the misuse does occur in logic, and also that the logical axioms (when applied in the only possible way) are downright misleading. Their defects do not require to be spoken of as vague future possibilities, but are well within the range of any one's understanding at the present day. The only excuse I can suggest for the common habit of ignoring them lies in the real difficulty of recognising consistently the distinction between a rule considered as a major premiss and a rule merely 'up in the air'. One reason why it is so often overlooked may perhaps be found in the fact that the same verbal statement of a rule is naturally made to serve both purposes, so that it is difficult to see that the two different interpretations of the same form of words amount in effect to two different rules,—or to a rule on the one hand and the ghost of a rule on the other. And the difficulty is increased by the fact that there is no pair of contrasted names in general use by which to

[1] It may, for instance, be held that where a mathematical law has been applied to a subject which does not admit of mathematical treatment, there we have an abstract law applied to the given whole instead of to an abstracted part only of the particular case. I gather that Mr. Schiller would in some such way regard mathematical and logical axioms as alike in providing the same temptation to misuse.

mark the difference and keep it in view. The distinction is not simply (*e.g.*) that between 'abstract' rules and others. The least inappropriate[1] pair of names seems to be 'applicable' and 'inapplicable'. By an applicable rule we should thus mean any rule that is not afraid to run the risk of application in minor premisses; or any rule which is not interpreted so as to beg the question it professes to answer about what may be inferred (supposing it true) in particular cases of a specified kind. When it says that all A are B, it refuses to shelter behind the explanation that any case of apparent A which is *not* B thereby stands condemned as not properly a case of A at all. For example, the Law of Contradiction taken in the abstract does no more than define the word 'contradiction,' by saying that *if* two apparently contradictory statements do not cancel each other they are not really 'contradictory' statements; while on the other hand the applicable Law of Contradiction ventures beyond this verbal explanation, and therefore can claim only a *primâ facie* truth which may in any case mislead those who trust it simply.

If our party are right in this matter, and if no relevant objection can be brought against our view, what we must expect, of course, is to be told that it is so obviously true that it need not have been expressly stated. That is the usual fate, in controversy, of philosophical views when it becomes clear, in the end, that they have to be admitted. It was for this reason that I began by quoting an instance where our view (in spite of its being so obvious) was actually not understood. That is however only one instance out of many. Nearly everybody, I believe, except the Pragmatists, is still disposed to put unquestioning faith in general rules which are only not misleading when they lead nowhere, which are only undeniable when they beg the question they profess to answer when applied. The common platitudes or truisms of every-day thought get their whole inspiration from this practice. Formal Logic is entirely built upon it. And the more ambitious any system of Metaphysics is, the more it seems driven in the same direction. We may admit quite easily that it is only in the interests of practice that there is any fault to be found with attempts to soar above all practical considerations. But then the whole dispute seems to lie be-

[1] Inappropriate because I admit that an inapplicable rule is too much honoured by being called a rule at all. But this objection cannot pretend to be more than literary.

tween those who think they can understand what is meant by a claim to Truth which is above all considerations of practice and exempt from all scrutiny, and those who assert that no such attitude is intelligible. To the latter it seems that to make this claim for any theory is a covert way of confessing its instinctive dread of facing a theory's only test.

V.—THE MEANING OF THE TIME-DIRECTION.

By R. A. P. Rogers.

[Abstract.]

Kant endeavours to give an objective meaning to the Time-direction by regarding it as a concrete expression of the Category of Cause and Effect, which is the only Category which expresses an irreversible relation between objects. A determines B but B does not determine A. Now this Category as *intellectual* can only mean that if the cause is given it is possible for intellect to *deduce* the effect; on the other hand, if the effect is given it is not possible for intellect to deduce the cause. As applied to Time, this means that given the Past the Present and Future can be foretold, but given the Present or Future the Past cannot be uniquely deduced, and may be one of several. This difference of relation, for Kant, gives meaning to the Time-direction; if this were not true, there would be a Time-order but no Time-direction. The principle is shown, however, to be false, for the Time Series is unique and all its parts are necessarily connected; hence omniscient intellect could deduce the only possible Past from the Present, with the same certainty as it can deduce the only possible Future from the Present. Therefore the *intellectual* relation between Past and Present is *reversible*. This is illustrated by showing that the fundamental laws of rigid dynamics, $s = \frac{1}{2} ft^2$, etc., are reversed by merely changing the sign of t.

We must therefore seek for some other objective determinant of the Time-direction.

I notice that the Time-direction is psychical, *i.e.*, when the conscious subject is abstracted, Nature appears as an endless series of phases continuously connected extending in either direction (Past or Future) indifferently. The laws of science illustrate this.

Hence it follows that consciousness must make the Time-direction.

I conclude that the Time-direction must have a psychical basis, and therefore a *psychological* explanation of it is valid, provided this can be made objective.

The explanation must therefore begin from subjective experience of the difference between Past and Future. Consciousness is always in the present, which is, so to speak, an ever-changing unit containing elements which give a meaning to the distinction between Past and Future. These elements are memory and expectation respectively in a general sense. But the active elements in both accentuate the difference most strongly. Thus desire intensifies the conception of the Future. The Future is that which can be an object of desire and is the direction in which Will moves; the Past has only a theoretical interest.

This explanation, however, is purely subjective and individual. How is there one Time, and one Time-direction for all conscious beings?

Since the Time-direction has a psychical meaning only—and in the

individual it is given by Will—the objectivity of the Time-direction necessarily implies objective Will.

The Future, in fact, *is* the direction in which Objective Will necessarily moves, and through this necessary motion Time ceases to be a mere continuum. The Motive which actuates objective Will is the continuous and progressive development of some unique psychic Quality. This Quality, by its very definition, must be an 'absolute and common good' since objectivity of Will implies universality.

As Nature inevitably strives after an absolute and common good for all conscious beings, we have a reconciliation between Rational Ethics and Natural Law.

Finally the assumption of a Supreme Spirit immanent in Nature, delivers us from the solipsism which arises from the conception that any individual human will can guide the processes of Nature. The human Will becomes rationally objective through submission to the Divine.

From the point of view of Religion, Time is the form in which the Divine Purpose is manifested to finite minds. Ethics regards the Future as the possibility of a better state of humanity, to be attained by free conscious action. Again, if Kant is right, in ordinary experience we are bound to regard Time as the form in which the intellectual Category of irreversible relation becomes concrete. Each of these three treatments of the form of Time is an attempt to give an objective spiritual meaning to the direction—as distinct from the continuity and order—of the Time series. It is of great importance to determine if a connecting link can be found between the solutions offered in the three spheres of Religion, Ethics and theoretical philosophy. With this end in view, I propose, in the first place, to examine Kant's proof of the Second Analogy, 'All changes take place according to the law of connexion of Cause and Effect'.[1]

The proof of the Analogies depends on the famous Anti-Humian principle that the objectivity of experience, as distinct from the subjectivity of mere impressions, means the regulation of quantified and qualified perceptions by universal and necessary laws. When we say that an event *does* happen, or that an object *is* in a certain place, we mean that a certain perception *must* rise in the mind of any observer (in a given position and with given sense-faculties) in virtue of its necessary connexion with other perceptions, and that the mind *conceives*, though it does not *feel*, this necessity. The experience of the individual is, for Hume, a mere cinematographic display of impressions; it is this for Kant also, but the objectivity arises, not from the panoramic

[1] By Time-direction, I mean the relation of Past and Present. It must be carefully distinguished from the Time-order, which implies that Time is a *Continuum* of objects, like a straight line, in which the direction is indifferent.

phantasms possessing a concrete internal meaning—as ordinary people foolishly think—but from the fact that the spectator, placed in a given position, knows that the parts of any one picture *must* be arranged as they *seem* to be and that the pictures *must* follow one after another in the order in which they *seem* to follow. An appearance becomes objective as soon as it is recognised as a necessary part of a scheme of appearances. Knowledge—as distinct from subjective feeling—implies that we recognise that the panorama of qualified and quantified impressions could not be unrolled in the reverse order, and the objects of the picture could not be arranged in any other relative position.

Each of the necessary *à priori* intellectual elements of experience are exhibited by Kant in three phases, passing from the abstract to the concrete. First, as an abstract Judgment of formal logic. Secondly, as a transcendental concept or Category, referring to objects in general. Thirdly, in their application to our concrete experience, that is, to our perceptions. Here they become necessary laws or Principles of Space and Time experience. Each phase is a more concrete expression of the preceding one, and each of the last two phases may be exhibited in the first phase as a judgment. The differentia of a Principle or of the corresponding Category appears in the corresponding Judgment.

In the Principle which I am now discussing—that of cause and effect—the logical phase is the Hypothetical Judgment; If a proposition A is true, the proposition B is true. This judgment is *irreversible*, that is, from its truth we cannot infer the truth of the converse; If B is true, then A is true. In the transcendental sphere the Category expressed as a judgment is: If A is objective then B is objective. This judgment, in like manner, cannot be converted; we cannot infer from its truth that the objectivity of B involves the objectivity of A. Here, then, we have the concept of an irreversible relation between objects, which Kant terms the relation of cause and effect. Passing to the third stage, that of our experience in Time, the Principle may also be expressed as a Judgment, 'If A happens, then B will happen, or is happening'. This judgment cannot be converted; from its truth we cannot infer the truth of the judgment; 'If B happens then A has happened': for otherwise the connexion with the Hypothetical judgment would fail. The Principle then expresses the necessary irreversibility between *events*. This irreversibility is the concept which gives an objective meaning to the Time-direction of perceptions.

If the judgment, 'If A happens, then B happens,' could be

reversed, it would be meaningless to say that A exists before B in time. In other words (Kant holds) the irreversibility of the Time-direction depends for its objective meaning on the irreversibility of the intellectual relation between cause and effect. If a definite event (c) is given, then another event (e) is necessarily determined, and must follow. But if e alone were given we could not argue that c is necessarily determined and has already taken place. Kant seems to have overlooked that this would be the true intellectual reversal of the relation. A given cause can have only one effect or series of effects, but a given effect may be produced by an indefinite number of causes. Or, more generally, many different series of events may have preceded a given event; but only one series of events can follow a given event. The Future is determinate, the Past indeterminate.

This relation between Present and Future as conceived by Kant may be illustrated mathematically. Let x be a present event, y a future event, the effect of x. The relation of cause and effect may be expressed by a functional equation $y = f(x)$. When x is given y is uniquely determined; in other words, $f(x)$ is a single-valued function of x. On the other hand, when y is given x is indeterminate, having more than one possible value; that is, x is a many-valued function of y. The equation $y = \sin x$ would be of this type; given x, y is determined; given y, x has an infinity of values, $n\pi + (-1)^n x$, where x is one of these values. If $f(x)$ were a polynomial, such as a cubic, the same irreversibility would follow. Kant's doctrine expressed in mathematical language implies that the cause is a multiple-valued function of the effect, but the effect is a single-valued function of the cause.

The whole of Kant's argument for the objectivity of the Time-direction (as distinct from the objectivity of the Time-order, and of the isolated events in Time) depends, therefore, on the truth of this compound proposition, 'A given cause produces a determined effect, but a given effect may be produced by different causes'. If this proposition is false, that is, if the present and future are, intellectually, reciprocally determinate, then the Time-order, for Kantians, is not objectively irreversible. Events in Time, as well as objects in space, will stand in a relation of Community (action and reaction).

The principle that when a phenomenon is given, the effect is uniquely determined may be termed the Singularity of Effects (as contrasted with the Plurality of Effects, when a phenomenon is given, the effect is indeterminate). The corresponding doctrines when cause and effect are interchanged may be termed the Singularity of Causes, and the Plurality

of Causes, the latter term being borrowed from Mill. It is clear from the above that (for Kant) the objective irreversibility of the Time-order depends on the truth of the two principles—the Singularity of Effects and the Plurality of Causes. But it will be shown in the sequel that if the terms Cause and Effect are used in the ordinary conventional and abstract sense, the Plurality of Causes and the Plurality of Effects stand or fall together, and the Singularity of Effects and the Singularity of Causes are likewise inseparable. On the other hand, if the terms Cause and Effect are used in a fully comprehensive sense, the Singularity of Causes and the Singularity of Effects are both self-evident; and the Plurality of Causes and the Plurality of Effects are axiomatic absurdities. It will be therefore in either case necessary, on principles suggested by Kant, to seek for some new universal concept, law or notion, to objectively determine the Time-direction.

Before further discussion it will be well to fix a definite meaning to the notions of cause and effect, as exhibited *in concreto*. In ordinary language a cause is an isolated phenomenon, necessarily succeeded by another isolated phenomenon, its effect. For example, a diminution of pressure in the atmosphere causes a fall in the barometer; a sickness is the cause of death, and so on. Kant and Hume seem to have used these terms in this narrow sense. Mill defined cause as a sum of conditions positive and negative, either simultaneous with or preceding the effect, which necessarily appears when these conditions are given. Though in this way he extended the use of the term "cause," he continued to use "effect" in the same narrow sense of an isolated phenomenon. This abstract use of terms is inevitable in practical science, which aims at producing definite effects; but Philosophy deals with the concrete whole of phenomena, not with abstract, isolated phenomena, and its terms should be as comprehensive as possible. By extending the notion of a sum of conditions, we arrive at the following definition of the notion of a concrete cause. A Cause *in concreto* is the entire infinite complex of phenomena existing at any given instant, when this complex is viewed in relation to the entire infinite complex of co-existing phenomena which follow it in Time; the latter complex in relation to the former is Effect; and again becomes Cause of the succeeding infinite complex. An infinite complex of co-existing phenomena may be termed a *complex moment of Nature*, and I shall hereafter refer to it as a Moment. Nature passes in turn through its different Moments, each of which is a complex totality, in virtue

of the law of Community which connects all its co-existing phenomena. Any integrated sum of Moments is likewise the cause of the succeeding integrated sum of Moments. *The relation of cause and effect can be applied only in a loose and secondary sense to isolated phenomena.* This limited use is, as I have said, inevitable in science and ordinary life, but it really points out those elements in true cause and effect which are most conspicuous or most important for the observer, and capable of being reproduced in connexion. We say that a person's illness is the cause of his death. In the wider sense of the term, the cause is the integrated sum of Moments which include his illness; the effect is the Moment which includes his death. General laws of science are abstractions, which hold good, and are true, so long as their limitations are not overpassed. Nature herself is not an abstraction, but a concrete reality acting inevitably according to her own laws; but for Nature these laws are not formal or abstract. The activity of Nature, as Spinoza would say, is free, and not a submission to external generalities or abstractions. We may concede, however, that a Moment of Nature is, figuratively speaking, *condensed* in any one of its parts, and this part in its representative capacity may be regarded as the cause in relation to the following contiguous phenomena, which is similarly representative of its Moment.

The sense which I have attached to cause and effect relation, as exhibited *in concreto,* is, I hold, necessary in order to make Kant's argument definite; for there is not a different time-series for each isolated train of phenomena. If the cause and effect relation determines the one time-series, there must be only one cause and one effect in each moment of Time. Nevertheless, even if cause and effect are predicated of isolated phenomena, the Singularity of Causes and the Singularity of Effects stand or fall together according to the point of view we take. Every series of phenomena may be regarded as different phases of a permanent. If attention is fixed on the phases, then each phase may be preceded or followed by a variety of determinate phases; and in this sense the Plurality of Causes and Effects hold good. But if attention is fixed on the permanent, then the relation between cause and effect is merely one of Identity, and the Singularities of Causes and Effects are self-evident. A given quantity of heat may pass *in any order,* according to circumstances, through different phases, and finally pass into mechanical energy, which in turn may produce the same quantity of heat. These transformations are held as a *proof*

of the existence of a permanent sum of energy. The transformations are reversible and indeterminate. This indeterminateness in the order of the phases arises from abstracting from the actual environment. The indeterminateness is removed when we regard nature as a concrete whole; then each complex Moment is the unique and necessary cause of the succeeding Moment which is its unique and necessary effect. The complete Present could have been deduced from the Past, only if all the past conditions are given; and reciprocally if all the present conditions are given the complete Past can be deduced from the Present. In other words, the Past is as intellectually dependent on the Present as the Present on the Past.

The objection which a whole-hearted Kantian will urge against this conclusion is that the mistake arises from neglecting the schema of Time. Kant himself saw the difficulty of applying intellectual concepts to the pure form of intuition, and to overcome this difficulty he invented—or pointed out—the existence of the schema of Time, that is, the form of Time determined *à priori* by the Category, before empirical objects exist therein. The forms of Time exhibit it as something more than a one-dimensional continuum; the direction from Past to Present is also involved. 'The schema of cause is the real which when posited is always followed by something else. It consists, therefore, in the succession of the manifold, in so far as that succession is subject to a rule.'

But this description of the schema itself justifies my criticism. There is a definite rule of succession. You have the direction of Time given in the pure form of intuition; and the succession of definite units according to a rule is, we will suppose, given by intellectual law. But this law is not one of irreversible dependence. It is rather a law of definite order in which each unit depends on the law of order, but *not on the preceding unit any more than on the succeeding.*

The conclusion at which we have arrived is capable of an *ad absurdum proof.* If the Past is not intellectually dependent on, and therefore deducible from, the Present, the Present may have had several different Pasts. Any one of these different Pasts is necessarily connected with the actual Present; therefore, for Kant, each of these Pasts actually happened! For a Transcendental Idealist, the actual Past is that series of events which would necessarily produce present perceptions, possible or actual. This follows from the Second Postulate of Empirical Thought. "Was mit den materialen Bedingungen der Erfahrung (der Empfindung) zusammen-

hängt, ist wirklich." The history of Nature and Man will be indeterminate, being, in fact, multiple. It will be meaningless to inquire what was the actual course of History, for there were many courses. The problem will be what different series of events could have produced the Present. It may be true that Napoleon really existed; it may *simultaneously* be true that he was a myth, and that all the writings and traditions relating to him were forgeries or lies. Memory also will be an extraordinary phenomenon; of these different actual Pasts it selects only one; but it should, if trustworthy, report all the different actual Pasts which, experienced by the individual, could have produced his present perceptions!

The above is a *reductio ad absurdum* of the doctrine of the intellectual irreversibility of the Time-series. The direct principle involved is that the actual course of History is unique, and the Present is representative of it; the Future is also unique and necessarily follows from the given Present. Omniscience could argue back from the Present to the only possible Past, *i.e.*, to the actual Past; or from the Present to the only possible Future, *i.e.*, to the actual Future. Dynamics affords a good illustration of this. In that science—as in all abstract sciences—Time is regarded as a one-dimensional continuum (t) in which the *order* of events is necessary, but the *direction* is conventional. It is true that no dynamical scheme has been discovered which will satisfy all the formal laws of Nature; yet the reversibility of dynamical laws are symbolic of the intellectual reversibility of all the laws of Nature. Newton's laws are expressed in *prophetical* form, but they are really just as much *historical*. The first law, for example, may be stated, 'Every body *has* been in a state of rest or uniform motion in a straight line since the last force acted on it'. If the *motion* of every particle of matter were instantaneously reversed, it is quite possible that, every law remaining unchanged, past phenomena would be produced in inverse order. The planets, for example, would move round the sun in the opposite direction in exactly the same orbits, and with the same periods, if their motions were instantaneously reversed. A like theorem is true for every conservative system of forces; if the velocities at every point are reversed, the past states are reproduced in the same order. Whether this is true in general does not alter the fact that the reversed order is always uniquely deducible by changing the sign of t in the prophetic equation. The simplest cases are the fundamental equations. The equation $s = vt + \frac{1}{2}ft^2$ is prophetic or historical according to the sign

of t. It may be objected that this equation does not apply backwards *ad inf.*, but its backward application, like its forward application, is dependent on the positions of other particles. The present positions, masses and velocities of all the particles are supposed to be given in both cases.

We conclude that the relation between the Complex Moments in the Time-series is, *intellectually*, a relation of reciprocity—action and re-action—just as much as the relation between different objects in space. Keeping to Kant's intellectual view of Causality (the pure Category), this means that the Future is just as much the cause of the Present as the Present is of the Future, or to put the same truth in different language, the Final Cause (the Future viewed as determining the Present) just as much as the Efficient Cause (the Present viewed as determining the Future) is a necessary postulate of Science and of History.

This conclusion will no doubt cause some surprise. To those who, in opposition to Kant, hold that events in Time have a self-dependent, isolated existence, the proof will appear as a mere *argumentum ad hominem* against Kant, and therefore of little value. It must be fairly obvious, however, that Time is the form in which the eternal concrete unity of Nature breaks into a plurality of phases. Each phase has thus an eternal or ontological as well as a merely transitory or phenomenal meaning. The ontological meaning—though it is really concrete—we make definite to ourselves by conceptions of universal laws, which as such are supra-temporal. Each Moment acts ontologically *sub specie aeternitatis*. We cannot say that the Future does *not yet* act ontologically, for the ontological action must be conceived as outside the Time-series. A Moment of Nature viewed phenomenally, that is, as a mere appearance, is not determinative of anything either past or future. The *action* of Nature is, so to speak, behind the scenes, and revealed to us by intellectual conceptions of necessary connexion. Ontologically, then, the Future exists even in the Present, through the fact that it necessarily determines the Present; and the Past is actual in the Present because it necessarily determines the Present. The Future is dependent on that which is eternal in the Present, and the Present is likewise dependent on that which is eternal in the Future. The same eternal essence manifests itself in both, in different phases. The point at issue between the Final Cause and the Efficient is: Does the Future, the Present or the Past more clearly reveal to us the eternal and invisible essence of Nature?

We have now to attack the question which we have seen

is not solved by the Category of Cause and Effect. What is the objective law, concept, or notion, which makes the difference between Past and Future, or must we regard the problem as insoluble and admit that the difference is purely subjective and based on momentary feeling? Nature reveals herself as a plurality of units (Moments) in a fixed order, but more, there is a certain direction in this order. What does this direction mean? The units themselves (as appearance) do not contain this meaning, this difference. Is there, then, some transcendent quality existing in the Present in a greater degree than in the Past, and in the Future in a greater degree than in the Present?

Static reflexion as distinguished from personal and historical experience—cannot answer this question, for it only regards the Time Moments as having an external relation to each other. *Apart from conscious existence in the time-series the Time-direction is indifferent.* Mathematics, pure and applied, are the best illustrations of this. For these time is a one-dimensional quantity like a straight line ($\pm t$). This is obviously true in Algebra, Geometry and Statics, and I have shown that it holds for Dynamics. It is true, though not so obvious for every abstract science—that is, for every science except Ethics, which is the only science whose direct object is personality as actually existing in concrete, and not as an abstraction. All natural and experimental Sciences abstract from self-consciousness. The essential thing in these is continuity and arrangement in definite order. It seems paradoxical, but is nevertheless true, that in these abstract Sciences the time-*direction* is of no consequence. Scientific laws may be expressed in logical form, *e.g.*, All A is B, and this form is independent of the Time; or they may be expressed in continuity form: If A is, B follows in Time. But the essence of this law is expressed in the statement that A and B are juxta-posed in a continuum, a *conventional* direction being assumed. The whole order might be reversed, and we could say: If A is, B *preceded;* no error would ensue, because the relation of Past and Future is here quite abstract and conventional. Evolution does not alter this argument. The same is true even of empirical psychology, which in its laws regards states of mind as different entities arranged in a certain order. It is only in their ethical application that the laws of abstract sciences become concrete. The laws have a concrete origin, they are discovered by persons acting from ethical motives, and in like manner they have a concrete application. A scientist, in expressing these laws, naturally takes the order in which they were actually revealed to him

as the most convenient one for statement, but this does not alter the fact that, expressed as abstract general laws, Time is regarded as a one-dimensional continuum; and they do not invoke any notion of time direction unless they are brought into *express* connexion with self-consciousness. This is done in the practical application of the laws. "Science must treat the world of objects as self-subsistent in abstraction from the knowing subject,"[1] and when this abstraction is made, the Time-direction, though not the Time-order, is indifferent. Every science deals with a mere plurality of objects; its general laws state connexions between objects or classes of objects.

The essential difference between Past, Present and Future has, I conclude, no meaning when Nature is regarded externally, that is, as a complex of lifeless phenomena. Externally viewed, Nature is a unity possessing an infinite series of phases (Moments). Each phase is necessarily connected with the contiguous phase on either side of it, in the one-dimensional continuum of Time. But no Time-*direction* emerges from this view of Nature. The Time-direction only emerges when the mind returns to itself and views Nature internally or from the subjective point of view. The subject, so to speak, puts life into Nature, which otherwise appears as a lifeless connexion of units, arranged in a determinate *order*, but possessing no *direction*.

We have now arrived at a most important truth. *The irreversibility of the time-direction is purely psychical;* we cannot therefore treat the time-order in an abstract formal way as Kant did; for if we do so, we shall never get beyond the continuum idea; for the meaning of the Time-direction we must have recourse to concrete personal experience. Thus the subjective or psychological method of interpreting the Time-direction is indispensable as a starting point; for its objectivity is primarily revealed to us through its subjectivity. Anthropomorphism is here justifiable and necessary, for the time-direction is actual for a conscious Time subject, and not actual when we abstract the conscious subject. The mind apprehends each of its phases (sub-phases of Nature) as a present consciousness. The subjective question will be what qualitatively differing feelings or sensations are there in present consciousness, which give rise to the conception of a qualitative difference in the direction in which Time-units move?

Our first appeal, therefore, will be to direct psychological

[1] Mr. T. F. Underhill, MIND, April, 1904.

observation. The subjective meaning of the Time-direction will emerge from an analysis of the units of consciousness. By a unit of consciousness I merely mean a concrete synthesis of which one is immediately conscious. These units are the ultimate data of observational psychology. Every such unit is really an instantaneous phase of the Ego, and the bridge between preceding and succeeding units. Each unit thus involves two elements, memory and expectation. Of course it is only by repetition and comparison that these elements emerge as distinct. The unique quality of the memory-element is the subjective basis of a conception of *past* time; the unique quality of the expectation-element is the subjective basis of a conception of *future* time. Subjectively then, the conception of past time has for its empirical basis a perception of the quality common to all memory sensations; to avoid abstraction we may describe it as individualised in a unit of consciousness, or a remembered series of such units, in which the memory element is specially prominent. In like manner the conception of future time is individualised in a unit of consciousness—or remembered series of such units—in which the expectation element is specially prominent. The subjective conception further of past time as a series arises thus: A series of units occur. Each unit as it occurs contains in itself a memory of the last, and contrast as well as resemblance therewith. The *contrast* makes us conscious of a difference in the units, the *semblance* gives a sense of a unity or connexion. Each unit has a direct contrast with its neighbour. Thus in a given unit you have a memory of a contiguous memory of a contiguous memory, etc. This can be imaged only by a spatial continuum. How does the sense of a unity of the series arise? To answer this we must remember that each unit is a phase of the Ego. The unity of the Ego is given in the unit, and in each unit past units are presented as memories and so as phases of the present unity. Thus there is only one series, as only one Ego is conceivable. When once we have imaged the past as a spatial continuum (most simply a line) with the present Ego at one end of the line, there rises inevitably a thought of this line extended indefinitely in the other direction; and this in connexion with the expectation-sensation gives a conception of future time as a series.

The subjective root of our concept of future and past time is, however, not expectation and memory in a passive sense only; it includes desire and aversion generally, that is, a sense of mental activity. Desire involves imagination, by help of past experience, of a phase of the Ego different from,

and more pleasant than, the present phase. Primarily this image of the Ego is subordinate to the present Ego, and quite static—merely an ideal. Secondarily, the present Ego-phase strives inevitably to pass into the imagined pleasanter Ego-phase, *i.e.*, it strives to exclude all perceptions which are imagined as non-existing in the ideal Ego-phase. There is thus a conscious effort to expel certain perceptions—aversion, a negative self-destructive activity of the present Ego, which in its entirety rejects and repudiates some of its parts. This aversion, when successful, intensifies the conception of past time. In like manner Desire is a positive activity, a conscious effort on the past of the present Ego to give the fullest possible intensity to the imagined pleasant Ego-phase. Thus desire intensifies the conception of future time. It may be noticed that the subjectivity of these processes is strongly apparent in that *eidolon tribus* to which most of us are subject—the tendency to persuade ourselves that what is pleasant is true, and what is unpleasant is false. Fear may be termed negative desire, and is distinguished from aversion as being directed not against the elements in the presented Ego-phase, but against an imagined Ego-phase. Fear also evokes the conception of future time. In like manner the feeling *Relief* is successful aversion, and tends to strengthen the concept of past time. Generally speaking, the Past is that which evokes only a theoretical interest and cannot be an object of desire. The Future evokes a lively practical interest, and is necessarily an object of desire in some form. *Desire, then, is the subjective element which gives a meaning to the distinction between Past and Present.* The mind is passive in relation to the Past, active in relation to the Future. Without desire, there can be no self-conscious existence in Time.[1]

We may inquire whether this hypothesis has an immediate practical application. An event B follows A; we say then that A is not, and B is. Our attitude towards the perceptions given by A is this: They are thrown away, they are no longer possible objects of our desire, they have, so to speak, a merely theoretical interest. It is true that so-called consequences survive, and have an immediate practical interest, but consequences are *ipso facto* in the Present, B. The Future, on the other hand, has a practical interest, it is an object of desire (including curiosity), and has a *real* meaning in the Present.

[1] Since writing this article, I have been informed that Dr. Hodgson's psychology of the 'Time-stream' is virtually the same as the above.

The above may be regarded as a solipsistic exposition of the genesis of a conception of the Time-direction. If I were the only Ego, further discussion would be superfluous. I could say Past Time is the abstract form which memory (including successful aversion) creates for itself, and Future Time the form which expectation (including desire) creates for itself. The Past would be a thin psychological residue of numerous memories and successful aversions, and similarly for the future. It would be idle to ask: Does consciousness presuppose the time-direction, or conversely? The concrete elements of consciousness are the given realities, the form is abstract and ideal.

But I am not the only consciousness. Where, then, does the conception of the objective unity of the Time-direction arise? We have three degrees of psychical unity. First, the unity of a unit of consciousness—here the conceptions referred to originate; secondly, the unity of the Ego through all its units; thirdly, the unity of the experience of all conscious beings.[1] The objective unity of the Time-direction exists as the same conception for all conscious beings, it must therefore involve, in so far as its objective nature can be understood, the conception of a Collective Will of conscious beings. *There is one Time-direction for all in so far as they will the same thing.* The unity of the Time-direction is thus a mere hypothesis except on the assumption of a universal object of will common to conscious beings who have a rational consciousness of their existence in Time. That all minds which are capable of a rational knowledge of Nature are the expression of a Concrete Unity, and in their Unity aim at a single end (the Future) is the assumption necessary to justify our conviction that there is one Time-direction common to all conscious beings.

Time, then, primarily a one-dimensional continuum is directed by the motion of Objective Will. The Future *is* the direction in which Objective Will proceeds. This assumption is necessary to give the conception of unified force. The direction, however, is not arbitrary but essential. The Will proceeds not according to fickle choice, but according to a single principle actualised in the other direction of the Future. There must, in short, be a continuous

[1] The subjective conception of the Time-direction is created by desire. It has been shown, further, that the Time-direction has only a psychic meaning. It follows that its universal meaning can be no more than an extension of the immediate meaning which it has for the individual. This is the fulcrum of the argument which is not however solipsistic but personal.

motive urging objective will, whose process is now seen to be development or evolution, the unfolding of something which did not exist before and which is *inevitably progressive;* and not to be identified with any collocation of things in Nature viewed externally. I have endeavoured to show, in fact, that the mere Form of Time necessarily implies a certain continuous development of some unique Quality in Nature *viewed psychically* (the abstract or external point of view gives mere continuity). This Quality belongs to the Time Moment as a whole, not to its isolated parts. The Present contains more of the Quality than the Past, and the Past than the Future. We have seen that the Time-direction has a psychical meaning only; but since their direction is only the form in which the Quality appears, it follows that the Quality has a psychical meaning, and since the Time-direction is objective and universal, so is the Quality. It is, in other words, that which is an object of Universal Will. When two persons will the *same* object, they are in touch with this secret of Nature. To will the same object does not mean merely to have harmonious wishes, which can both be gratified, but to will something as an absolute end. Now, in this conception (a common object of will) we have the innermost germ of morality. It is what Green calls an absolute and common good, and is, of course, clearly involved in Kant's conception, the universality of the moral law. *The Quality, therefore, at which Nature herself aims is 'An absolute and common good,'* a good common to all rational beings, *i.e.*, those endowed with the capacity for conceiving a common good.

Here are the heads of the whole argument. From the formal point of view Time is primarily a one-dimensional continuum, a series of units. The schema of Time is only a subterfuge to escape from this. The law of irreversible dependence (cause and effect) does not make it otherwise; for we have seen that the Past as well as the Future may be uniquely deduced from the Present. But when we come back to experience, we find that the mind *does* view the Past in a different light from the Present; and the felt distinction between desire and indifference is the subjective root of this distinction, we conclude that the Time-direction is not abstract but psychical—determined by Will. But the will must be objective, for Time-direction is objective. Hence Time is the form of continuous development of some Quality which is a necessary motive for objective or Universal Will.

This conclusion as to the objective basis of the Time-direction is, I believe, the only solution of the problem

raised. It has the further advantage of connecting intellectual philosophy with the Ethics of pure Duty (as exhibited by Kant) and with the philosophy of Religion. Duty requires that a rational being should act according to the conception of universal law, thus making his will objective. The above doctrine shows that every being who is completely and rationally conscious of his existence in Time must make his will objective—he must freely submit to the laws of Nature, regarding them as the expression of his own will, and at the same time as aiming at an absolute and common good. Thus the way is paved for Religion, which extricates us from the inevitable solipsism—involved in saying that a rational being recognises the laws of Nature as the expression of his own will—by providing the conception of a Supreme Spirit who is immanent in Nature—to Whom rational beings freely yield their wills.

VI.—SYMBOLIC REASONING (VI.).[1]

By Hugh MacColl.

1. There is no question on which logicians are so divided as that of the "Existential Import of Propositions". When we make any affirmation A^B, or any [2] denial A^{-B}, do we, at the same time, implicitly assert that the subject A really exists? Do we assert that the predicate B really exists? Do the four technical propositions of the traditional formal logic, namely, "Every (or all) A is B," "No A is B," "Some A is B," "Some A is not B," necessarily imply the actual existence of the class A? Do they necessarily imply the actual existence of the class B? These are questions upon which logicians have expended a great deal of thought and no small amount of ink; yet they appear to be as far from coming to an agreement upon them as ever. A simple theory of the subject, a theory to which they could all subscribe, should therefore be welcomed as a real boon. Such a theory I hope to be able to offer in what follows.

2. Let e_1, e_2, e_3, etc. (up to any number of individuals mentioned in our argument or investigation) denote our universe of *real existences*. Let 0_1, 0_2, 0_3, etc., denote our universe of *non-existences*, that is to say, of unrealities, such as *centaurs*, *nectar*, *ambrosia*, *fairies*, with self-contradictions, such as *round squares*, *square circles*, *flat spheres*, etc., including, I fear, the non-Euclidean geometry of four dimensions and other hyperspatial geometries. Finally, let S_1, S_2, S_3, etc., denote our *Symbolic Universe*, or "Universe of Discourse," composed of all things real or unreal that are named or expressed by words or other symbols in our argument or investigation. By this definition we assume our Symbolic Universe (or "Universe of discourse") to consist of our universe of realities, e_1, e_2, e_3, etc., together with our universe of unrealities, 0_1, 0_2, 0_3, etc., *when both these enter into our argument*.

[1] For V., see Mind, July, 1903.

[2] The symbol A^{-B} is here used as a convenient symbol for $(A^B)'$, the denial of the proposition A^B (see the *Athenæum*, 5th September, 1903).

But when our argument deals only with *realities*, then our Symbolic Universe S_1, S_2, S_3, etc., and our Universe of realities, e_1, e_2, e_3, etc., will be the same; there will be no universe of unrealities 0_1, 0_2, 0_3, etc. Similarly, our Symbolic Universe may conceivably, but hardly ever in reality, coincide with our universe of unrealities.

3. Now, suppose we have a class A. The individuals, A_1, A_2, A_3, etc., compassing it must necessarily all belong to the *Symbolic* Universe S; but whether they all belong to the universe of *realities* e, or all to the universe of *unrealities* 0, or some to the universe e and the rest to the universe 0, depends upon the particular circumstances of our argument or investigation. When a class A belongs *wholly* to the universe e, or *wholly* to the universe 0, we may call it a *pure* class; when it belongs *partly* to the class (or universe) e and *partly* to the class 0, we may call it a *mixed* class. The *negative* class `A (with a grave accent) consisting of the individuals `A, `$A_2$, `A_3, etc., contains all the individuals of our symbolic universe which do not belong to the positive class A. Hence, the class `$e$ is synonymous with the class 0; and the class `0 with the class e. The class `A may be called the *complement* of the class A, because both together make up the Symbolic Universe.

4. The subject A of any affirmative proposition A^B, or of any denial A^{-B}, is always understood to denote *a single individual*. If A happens to be the name of a class, then, in any proposition A^B or A^{-B}, the subject A is understood to denote a certain known, or previously indicated, individual of the series A_1, A_2, A_3, etc., whose special name or number it is unnecessary to state. For example, suppose A denotes *American*, and B *barrister*, the proposition A^B will then assert that "the *American* is a *barrister*". It does not say *which* American out of the whole series A_1, A_2, A_3, etc., is referred to; that is supposed to be known. When it is necessary to state which, then, instead of A^B, we must write A_1^B, or A_2^B, or A_3^B, as the case may be.

5. Let S be any individual taken at random out of our Symbolic Universe S, and let a, a', b, b', etc., be synonymous respectively with S^A, S^{-A}, S^B, S^{-B}, etc. We then get the following self-evident or easily proved formulæ, which we will name F_1, F_2, F_3, etc.

(1) A^S; (2) $(S^A)^{-\eta}$; (3) $a^{-\eta}$; (4) $a^{\eta\iota}$;
(5) $(`A)^S$; (6) $(`S)^S$; (7) $(`A)^{-A} + (A \equiv S)$.

The formula F_6 looks somewhat paradoxical; but it can be easily proved. By our definitions (see §§ 2, 3), the symbol `S denotes an individual that does not belong to the class S.

But, by definition, the class S denotes the *whole Symbolic Universe* (or "universe of discourse") to which every individual (real, unreal, or self-contradictory) named in our argument *must* belong. Hence, 'S is a self-contradiction. But, by our definition, all self-contradictions belong to the class 0. Hence 'S must belong to the class 0. But, by definition, the Symbolic Universe S contains all the individuals 0_1, 0_2, 0_3, etc., of the class 0, as well as all the individuals e_1, e_2, e_3, etc., which belong to the class of realities e. Hence, 'S must belong to the class S. In other words, the formula $('S)^s$, denoted by F_6, is always true. The preceding reasoning is a syllogism of the Barbara type, which may be expressed briefly as follows: "Every 'S is 0, and every 0 is S; therefore every 'S is S". The last formula F_7 asserts that an individual of the negative class 'A does not belong to the positive class A, except when A is synonymous with S and therefore denotes the whole Symbolic Universe. This Symbolic Universe, or "Universe of Discourse," may enlarge as the argument proceeds, seizing, appropriating, and firmly retaining every new entity (not excepting self-contradictory entities like 'S) which we designate by a symbol. Suppose for example, that in the course of our argument we have had to speak of several classes, *pure* or *mixed* (see § 3), and that all the individuals of all these classes amount to 82, of which 80 belong to the class e, and 2 to the class 0. Then, up till now, our Symbolic Universe S contains 82 individuals, so that we have

$$S = (S_1, S_2, \ldots S_{82}) = (e_1, e_2, \ldots e_{80}, 0_1, 0_2).$$

A fresh arrival 'S enters our Symbolic Universe, which immediately widens to make room for it; but the question has to be decided whether the stranger is to enter the class e or the class 0, just as parents have to decide the sex of a fresh addition to their family before they know whether to call it *Eva* or *Oscar*. The question presents as little difficulty in the one case as in the other; the new comer 'S (or S_{83}) is immediately recognised as belonging to the class 0, so that now we have

$$S = (S_1, S_2, \ldots S_{83}) = (e_1, e_2, \ldots e_{80}, 0_1, 0_2, 0_3),$$

the new comer 'S (or S_{83}) being synonymous with the new comer 0_3.

6. If every individual of a class A (whether a *pure* or a *mixed* class) belongs also to another class B; then, and then only, we say that "Every (or all) A is B". If this is not the case—if even a single A is excluded from the class B; then we say that "Some A is not B". If every individual in the class A be excluded from the class B; then, and then

only, we say that "No A is B". If this is not the case—if a single individual of the class A belongs also to the class B; then we say that "Some A is B". For example, let the class A consist of the five individuals S_1, S_2, S_3, S_4, S_5; let the class B consist of the eight individuals made up of the preceding five individuals together with the three S_6, S_7, S_8; and let the class C consist of the three S_7, S_8, S_9. More briefly expressed, let $A=(S_1, S_2, \ldots S_5)$; let $B=(S_1, S_2, \ldots S_8)$; and let $C=(S_7, S_8, S_9)$. Then, whether any of these three classes, A, B, C, be *pure* or *mixed* (see § 3), the following propositions follow necessarily from our data:—

(1) Every (or all) A is B, (2) Some A is B,
(3) Some B is A, (4) Some B is not A,
(5) No A is C, (6) Some A is not C,
(7) No C is A, (8) Some C is not A,
(9) Some B is C, (10) Some B is not C.

Any of the three classes A, B, C may consist wholly of realities, or wholly of unrealities, or it may be a mixed class containing both; whatever hypothesis we take in that way, the preceding ten propositions are true. (See § 11.)

7. We may sum up briefly as follows: Firstly, when any symbol A denotes an *individual;* then, any intelligible statement ϕ (A), containing the symbol A, implies that the individual represented by A has a *symbolic* existence; but whether the statement ϕ (A) implies that the individual represented by A has a *real* existence depends upon the context. Secondly, when any symbol A denotes a *class,* then, any intelligible statement ϕ (A) containing the symbol A implies that the whole class A has a *symbolic* existence; but whether the statement ϕ (A) implies that the class A is *wholly real,* or *wholly unreal,* or *partly real and partly unreal,* depends upon the context.

8. For example, let M denote "the *man* whom you see in the garden"; let U denote "my *uncle*"; and let ϕ (M, U) denote the statement "The *man* whom you see in the garden is my *uncle*". In this case we generally have

$$\phi\,(M, U) : M^{\epsilon}\, U^{\epsilon}.$$

That is to say, the statement ϕ (M, U) would generally imply that both M and U really exist. Next, let B denote "a *bear,*" and let ϕ (M, B) denote the statement "The *man* whom you see in the garden is really a *bear*". Here we should generally have

$$\phi\,(M, B) : M^{0}\, B^{\epsilon}.$$

That is to say, the statement ϕ (M, B) would generally imply that B really exists, but that the individual M is imaginary—a mere optical illusion. Now take the state-

ment ϕ' (M, B), which denies ϕ (M, B) and asserts that "The *man* whom you see in the garden is *not* a *bear*". Here we should generally have

$$\phi'(\mathrm{M}, \mathrm{B}) : \mathrm{M}^e \mathrm{B}^0.$$

That is to say, the denying statement ϕ' (M, B) would usually be understood to imply that M (the *man* seen in the garden) really exists, but that the particular *bear* spoken of is imaginary and non-existent. Lastly, take ϕ' (M, U) which denies ϕ (M, U) and asserts that "The *man* whom you see in the garden is *not* my *uncle*". Here we should generally say

$$\phi'(\mathrm{M}, \mathrm{U}) : \mathrm{M}^e;$$

but not necessarily ϕ' (M, U) : U^e. That is to say, the denying statement ϕ' (M, U) would usually imply the real existence of the *man* M, but not necessarily the real existence of "my *uncle*"; for the negative statement ϕ' (M, U) might be true even on the supposition that neither my father nor mother ever had a brother, so that the supposed uncle had never existed. Similarly, we may give examples of the implied existence or non-existence of *classes*, and show that as regards *real* and not mere *symbolic* existence, no absolute rule can be laid down; that, in each case, the conclusion depends upon the particular nature of the statement and upon the general context.

9. The preceding discussion seems to me to point to a serious and fundamental error in the commonly accepted systems of symbolic logic, founded on the Boolian principle of class-inclusion. These usually denote the class of individuals common to the classes A and B by the symbol AB, and they employ the symbol (A = AB) to assert that the class A and the class AB are the same, every individual in either being also found in the other. Thus interpreted, they say, and say truly, that the statement of equivalence (A = AB) is equivalent to the traditional "All A is B," or "Every A is B". So far I agree with them. But when they define 0 (or any other symbol) as indicating non-existence, and then assert that the equivalence (0 = 0A) is always true, whatever the class A may be, they appear to me to make an assertion which cannot easily be reconciled with their data or definitions. For suppose the class 0 to consist of the three unrealities 0_1, 0_2, 0_3, and the class A to consist of 0_3, e_1, e_2, e_3 (one unreality and three realities), the class 0A common to both contains but one individual, the unreality 0_3. We cannot here say that the class 0, which contains three individuals, is the same as the class 0A, which contains but one; neither can we say that every one of the three in-

dividuals 0_1, 0_2, 0_3, which form the class 0, is contained in the class A, which only contains one of them, namely, 0_3. And, *à fortiori*, an *infinite* class (0_1, 0_2, 0_3, etc.), cannot be contained in a *finite* class 0A, where $A=(A_1, A_2, \ldots A_m)$.

10. If in my system of logic my formula $(\eta=\eta A)$ asserted that the *class* η and the *class* ηA contained exactly the same individuals, this formula would be open to exactly the same objections as the formula $(0=0A)$ just criticised. But my formula $(\eta=\eta A)$ does *not* assert this; it only asserts the truism expressed by the double implication $(\eta : \eta A)\,(\eta A : \eta)$, namely, that it never happens that either of the two *statements* η and ηA is true while the other is false. The formula is equally valid in the form $(\eta_1=\eta_2 A)$, whatever be the impossibilities η_1 and η_2, and whatever be the statement A. For, by a linguistic convention which I believe all logicians accept, any compound statement, say ABC, is considered *true* when, and only when, *all* its factors, A, B, and C, are true; but it is considered *false* if it has *a single false factor* A. Consequently, it must be *impossible* (or *always false*) if it has a single impossible factor η. Hence, $\eta_2 A$ is impossible because of the factor η_2. We may therefore denote $\eta_2 A$ by η_3 (impossibility No. 3), so that the formula $(\eta_1=\eta_2 A)$ will then be equivalent to $(\eta_1=\eta_3)$. Now, by definition,

$$(\eta_1=\eta_3)=(\eta_1 : \eta_3)\,(\eta_3 : \eta_1)=(\eta_1\,\eta'_3)^\eta\,(\eta_3\,\eta'_1)^\eta.$$

But $\eta'_3=\epsilon_1$, and $\eta'_1=\epsilon_2$; for [1] the denial of any impossibility η_x is some certainty ϵ_y, so that the denial of η_3 is a certainty which we register as ϵ_1, and the denial of η_1 is another certainty which we register as ϵ_2. Hence, by substituting ϵ_1 for η'_3, and ϵ_2 for η'_1, we get

$$(\eta_1=\eta_2 A)=(\eta_1=\eta_3)=(\eta_1\,\epsilon_1)^\eta\,(\eta_3\,\epsilon_2)^\eta=\epsilon_3\,\epsilon_4=\epsilon_5.$$

11. Another disputed question which the preceding theory of the "Existential Import of Propositions" appears to decide is the validity or non-validity of the four traditional syllogisms, Darapti, Felapton, Fesapo and Bramantip. Now, as I pointed out in MIND, July, 1902, § 32, not one syllogism out of the whole nineteen is valid in its traditional form PQ ∴ R, as in this form it asserts without warrant that the two premisses P and Q are both true. In this form therefore any syllogism is false whenever either P or Q is false. To

[1] The denial of a certainty is an impossibility, the denial of an impossibility is a certainty, and the denial of a variable is a variable. If the chance of A is a, the chance of A′ is $1-a$. When $a=1$, then A is a certainty and A′ an impossibility. When $a=0$, then A is an impossibility and A′ a certainty. When a is some fraction between 1 and 0, then $1-a$ is also a fraction between 1 and 0, so that, in this case, A and A′ are both variables.

render the syllogism valid, it should be written in the form PQ : R ("*If* P and Q are true, *then* R is true"). Thus written, if in any syllogism we substitute for P, Q, R its special premisses and conclusion, we shall find that PQ : R, which means PQR′ : η, is a formal certainty, whatever syllogism out of the nineteen we take as an example. Take Darapti, one of the four considered doubtful. Darapti, in its corrected or conditional form, says this, "*If* every B is C, and every B is A, *then* some A is C". This is supposed to fail when B is non-existent while A and C are existent but mutually exclusive. Let us see. Suppose

$$B=(0_1,\ 0_2,\ 0_3),\ C=(e_1,\ e_2,\ e_3),\ A=(e_4,\ e_5,\ e_6).$$

Here we have

$$P=\text{Every B is C}=\eta_1$$
$$Q=\text{Every B is A}=\eta_2$$
$$R=\text{Some A is C}=\eta_3,$$

three statements each of which contradicts our data, since, by our data in this case, the three classes A, B, C are mutually exclusive (see § 6). Hence, in this case, we have

$$(PQ : R)=(\eta_1\ \eta_2 : \eta_3)=(\eta_4 : \eta_3)=(\eta_4\ \eta'_3)^{\eta}=\epsilon_1;$$

so that Darapti, in its corrected form PQ : R, does *not* fail in the case supposed.

12. The fallacious reasoning by which the Boolian logicians have arrived at the conclusion that Darapti, even in its corrected form PQ : R, is not valid, is founded on the assumption that their definitions of their symbols lead to the conclusion that the statement (0 = 0A) is a formal certainty; whereas, consistently with their definitions, this statement may be either true or false. For example, in the case $B^0\ A^\epsilon$, given in § 11, the statement (0 = 0A) is false.

13. It is curious that, by fallacious reasoning of a totally different kind, I formerly arrived at the same erroneous conclusion as the Boolian logicians about Darapti and the other three doubtful syllogisms. Finding, firstly, that the implication of the second degree

$$(b : c)\ (b : a) : (a : c')'$$

which, I may denote by F (a, b, c), expresses Darapti on the assumption that the propositions a, b, c *have all three the same subject*, namely, *an individual taken at random out of our "universe of discourse"*; and finding, secondly, that this formula, considered as a *general* formula, with no necessary reference to Darapti or any other syllogism, fails in the case $b^\eta\ (ac)^\eta$, I concluded, a little too hastily, that Darapti must also fail in this case. In this I overlooked the fact that, though the case of failure $b^\eta\ (ac)^\eta$ may arise in the *general* formula F (a, b, c), when a, b, c are understood to be wholly *unrestricted*,

the case need not arise, and, as a matter of fact, cannot arise when the propositions a, b, c are subject to the restrictions which render F (a, b, c) equivalent to Darapti. For these restrictions necessarily imply $a^{-\eta}\ b^{-\eta}\ c^{-\eta}$ (see § 5, Formulæ 2, 3).

14. Bearing upon this and similar pitfalls which waylay the too hasty investigator, in whatever branch of science, when he ventures to stretch his formulæ beyond their proper limits, the following rules and cautions may be found useful. Let ϕ_u denote any formula ϕ (x, y, z, etc.) when the variables, x, y, z, etc., have an *unrestricted* (or very wide) range of values; and let ϕ_r denote the same formula when the variables have a *restricted* range (or a narrower range within the same limits). Then, employing the symbol ϕ^ϵ to assert that ϕ is true for *all* admissible values of its constituents, x, y, z, etc., we have the true formula $\phi_u^\epsilon : \phi_r^\epsilon$; but *we have no right to assume the converse formula* $\phi_r^\epsilon : \phi_u^\epsilon$, *nor its equivalent, the formula* $\phi_u^{-\epsilon} : \phi_r^{-\epsilon}$. The assumption $\phi_r^\epsilon : \phi_u^\epsilon$ is the common fallacy in scientific researches of a too hasty induction, which erroneously supposes that the validity[1] of ϕ^r implies the validity of ϕ_u. The assumption $\phi_u^{-\epsilon} : \phi_r^{-\epsilon}$ which erroneously supposes that the non-validity of ϕ_u implies the non-validity of ϕ_r, is the fallacy which formerly led me into the error referred to in § 13.

[1] Any formula ϕ (x, y, z, etc.) is called *valid* when we have ϕ^ϵ; that is to say, when the formula is true whatever values, within the limits of our data, we assign to the variables x, y, z, etc. The statement $\phi^{-\epsilon}$, that ϕ is *not* valid, does not imply ϕ^η, that it is *never* true.

VII.—DISCUSSIONS.

THE PARADOX OF PSYCHOLOGY.

The paradox of psychology springs to view as soon as we put together a few admitted facts. These are: (1) Psychology is science not history, not the description of a particular man's Consciousness or Conscious Life, but of such life in general; the psychologist therefore is more than the individual merely observing himself; towards the great mass of his material he is bystander or spectator. But (2) no direct apprehension of conscious life is possible to any one but the subject of that life; therefore the psychologist must draw primarily (both in the logical and temporal sense) from self-observation, and by means of what he is aware of in himself must interpret such external and to some extent dubious signs as others may give of their consciousness. Finally (3) it is conceded that of our conscious life both as a whole and in its details we may be unaware, or at least misapprehend it; we are seldom in any degree (and never in the fullest degree) such bystanders to, such discriminating spectators of, our own conscious life, as the Psychologist (sanguine man!) desires to be of that of all men and even that of animals. Surely these admitted facts considered in combination constitute a genuine paradox. And of two misunderstandings, either of which helped to conceal the paradox, we have finally got rid. We are no longer misled by the word 'consciousness'; though we use it to cover both the mere feeling of anger and the awareness that I am angry (its earlier and most proper sense), we know that these two 'states' are different and often actually separated from one another: we would banish if we could the word 'consciousness' as fatally ambiguous. On the other hand we are no longer misled by the notion that we have an Inner Sense or Organ of what Locke called Reflexion, a special gift by which we apprehend our mental states in their nature and in their relation to our life as a whole. Are we then reduced to saying that whenever we are conscious, we *may* be conscious of that consciousness but usually *are* not, and at the best are only imperfectly so? that the secondary consciousness is a mere lucky chance or gift, and that it is on what is supplied by this rare, inexplicable θεία τύχη that all psychology has to build? A statement so purely empirical seems painfully out of harmony with a scientific treatise. It is true that the writer on Light has to speak of different colours, whose difference is barely

empirically known; but at least he brings these into connexion with one another *physically* by the relations between their wave-lengths, and perhaps he will ultimately bring them into mutual connexion *physiologically* by relations between them and the special parts of the optical nervous system. And are we psychologists to be content to say, that we go through various phases of Consciousness, and that if we can also observe them it is lucky—but that as to the conditions of our observing them and of observing them truly we have nothing to say?

It seems to me that having once erred in one extreme, we are now by recoil being driven to an extreme not less erroneous. It is very well to startle beginners or those who have been brought up in a bad school by pointing to Sir Anthony Absolute, angry and unconscious of his anger. The example, striking as it is—or was till it became hackneyed—is not really a very good illustration of what it wishes to illustrate. Sir Anthony's fault was certainly not lack of self-consciousness, not such exclusive concentration on the object of his mood that he had no attention to give to himself and his own mood. It was rather because he thought of himself as a father and as exercising the calm but authoritative control proper to a father that he failed to see that he was really in a furious passion not essentially different from that of a child whose toy has been taken from it. It is owing to that 'relative inattention' (of which Dr. Stout for instance speaks so clearly in his new text-book—*Groundwork*, pp. 54-56) that we are in general barely aware of our own 'mental states' and so apt to misdescribe them if some one forces us to attend to them. But that we are ever *absolutely unaware* of them seems incredible and absurd. I do not, as will be anticipated, rely on the old argument that 'to feel and to feel that we feel'—or even that 'to know and to know that we know'—'are one and the same thing'; there is a real truth at the bottom of such expressions, but they are apt to be expanded into doctrines that are very far from true. I simply ask how after all even a man totally absorbed in his object, like the cigar-smoker of Dr. Stout's *Manual* (p. 1), can really *know* that object or be led to deal with it in any manner (supposing his purpose to be πρᾶξις and not γνῶσις) except through his subjective consciousness. Dr. Stout truly says (*Groundwork*, p. 56) that we are 'to a large extent inattentive to' the varying magnitude and outline of the visible appearance of things seen at different distances and from varying points of view. But, as he goes on to say, 'the optical sensation suggests the real shape and magnitude, and to this we do attend'. Yes, but there must also have been attention (as part, no doubt, merely of a wider attention) to the sensations itself. And my point—the only point in this paper for which I claim any novelty—is that, if our attention to the object is baffled and unsuccessful, if we cannot make out what it is or where it is, or what is its size or what is its shape, we are then thrown back upon and become intensely aware of our own sensations, and clearly

discriminate them from the external object as something which must be clearly apprehended and fully analysed before we can attain to the apprehension of the external object. We may say the same thing of an emotion—*e.g.*, Anger. Active, successful, progressive Anger may well be unaware of itself. Anger 'is essentially a general impulse to crush and destroy' (Stout, *Manual*, p. 322). The angry man, then, when successfully pounding and hammering the man who stops his path, or the argument that conflicts with his opinions, or the resistance of an opposing will, will be almost quite inattentive to his own anger. But how, if he is baffled? he then has nothing but the angry impulse itself; and in unsuccessfully trying to gratify it he cannot fail to become more distinctly aware of what he wants, of his impulse in fact to crush and destroy something. Whether he calls this impulse 'anger' or by some other name is of secondary importance. Probably, like adults generally, he knows what anger means and therefore that it is anger that he feels; and if he will not give this ugly name to his emotion, it is because it is ugly, and he is trying to impose on himself. But in more complex cases it may well be that the man is really conscious of his 'state' but misdescribes it or fails to describe it at all, either from want of analytic power, or from the lack of practice in analysis which is the chief cause of that want, or simply from the scantiness and vagueness of his psychological vocabulary. The higher feats of self-consciousness may be explained on the same principle. What is meant by the now general admission that the development of self-consciousness is due to social life? Is it not that in social life we are pitted as individuals against other individuals and are thereby—since our will is continually obstructed—forced to take stock of ourselves and others, probably in the first place of others, while of ourselves it is largely true that 'the eye sees not itself but by reflexion in some other thing' and it is the sense that we figure as finite individuals to others that forces us to admit our own finitude and definite determinateness to ourselves?

J. SOLOMON.

VIII.—CRITICAL NOTICES.

Biographia Philosophica. By Prof. Campbell Fraser, D.C.L etc., etc. Edinburgh: Blackwood, 1904. Pp. xiv, 335.

Prof. Campbell Fraser names this a "Retrospect". As a retrospect it must, in its own nature, and on every count, have been a pleasure to him; and at least simply a pleasure, I think, it must prove to its many, and already perhaps mostly not unfamiliar, readers. Nor, if as much as this seems more particularly to concern the *Biographia*, is it to be said that the *Philosophia* has been less well tempered. Quite happily, indeed, the *Biographia* begins with the *Philosophia* that shall run, it may be, from end to end of the book; for it opens at once thus:—

"Perplexities of religious thought have been at all times springs of metaphysical reflexion. It was by them in crude forms that I was first attracted to inquiries which have engaged my life. The originating cause of the universe in which I found myself, and how I could know that this cause was God, were questions that disturbed my boyhood seventy years ago. . . . In an endless life, how can I, a million times a million years after this, remember anything that has happened in the present century, or have interest in, or identity with, the boy now living on this earth? . . .

"What am I? What sort of universe is this in which I find myself? What is to be its final upshot and mine?"

It is only as having begun with *Philosophia* thus, that he turns now to *Biographia*, and the particulars of his birth and ancestry; and on both Prof. Fraser has grounds to congratulate himself. He is a son of the Manse, and this Manse is lonely enough; but it has both charming sea and rugged mountain to look upon, while neither of them is unlegendary, unhistorical. Then for ancestry, a Fraser and a Campbell setting out into the world is again but as the young Durward, who, to the question, "Is it a gentleman's name?" could fierily reply, "By fifteen descents in our family!"

But the Manse had its within as well as its without; and its influences thence on the young Fraser are not to be counted one whit less. With his father, who had "passed his youth in the Puritan atmosphere which sheds awful solemnity over human life," there was, naturally, "Calvinistic orthodoxy at the manse". His mother, again, "had been educated in England, and afterwards lived

much in the South"; and so, if she "trained her son in the Bible" till "Old Testament History actually filled his imagination," she did not fail to inspire him also "with her own Anglican enthusiasm," which, at the same time, however, must have taken colour, it would seem, from the evangelical doctrine of the "Clapham sect".

A remote highland parish does not promise much for a stipend to its minister; and so the necessarily "modest income," further reduced, too, by "generosity to a brother," must have had its own straits under the needs of "a family of twelve," of whom Alexander was the eldest. Naturally, then, as we are told, the family "lived a self-contained life of Spartan frugality". In such circumstances, and with little more than an accordant tuition, the young Fraser grew up, as he says himself, "a shy, awkward boy; unobservant of what lay outside some strong individual tastes, physically educated by lonely walks, work in the manse garden or oaring in a boat; and with no outside youthful companionship".

It is precisely as such a boy, too, that he describes himself when in his first session, 1833-4, he entered the Junior Humanity Class at the old College off the High Street of Glasgow. "The publicity," he says, "and social collision of a Glasgow classroom came as a shock to a shy, sensitive boy, emerging for the first time from the lonely manse in Lorne. This, along with inadequate Latin and Greek, habits of desultory reading, and indifferent health in the surroundings of Glasgow, depressed me, and I felt myself a foreigner among my new associates."

Here he remained only a single session. But, "notwithstanding," he says, "I still fondly cherish the memory of college life, in that far-off winter—in quaint dingy courts, on dark winter mornings, as we gathered soon after seven to the sound of the college bell".

And so he, too, with a red gown on his back, must have seen, morning after morning, from the facing street, the twin lamps that just indicated the black devouring maw of the college entrance, as, right and left over its squared sides, they brought ever to the student's mind images of Bitias and Pandarus, supporters of the gate, while he hurried along, even agitated by the very peculiar, small, sharp, quick, quick, quick, of that strangely instant catalogue bell, the stopping of which meant the shutting also of the classroom door and the impossibility of an "*Adsum*" from him belated without to the call of his name within, with loss of the best of a certificate, uninterrupted attendance!

He mentions his Professors, Ramsay and Sandford, with a little more knowledge of them, perhaps, than in a single session he had opportunity to learn. It is characteristic that, philosopher himself, he has most to say of the Moral Philosopher he saw, though such tuition as the latter's in a college curriculum he had yet years to wait for, and, as eventually it proved, elsewhere. This was Prof. James Mylne. It was "him I looked at with most interest," he says: he "was probably, in 1833, the most independent

thinker in the Scottish philosophical Professoriate". Independent he may have been, and "old Mylne" was certainly spoken of in the college courts as something more than usual in his place. But I know not that Destutt Tracy as the authority he set up, and the consequently advocated Sensualism, could have even approached in truth and knowledge Reid and Common Sense. So—as with Stewart and Brown afterwards—we had still a "Philosophy of the Human Mind".

Prof. Fraser mentions only two names as those of fellow-students in the Junior Latin. Alan Ker is one of them—quite an intimate of the other who is gratefully aware of all the honour done him in the welcome terms of the remembrance—and he (Ker) was first prize-man in the Junior Latin of that year, as he was medalist in the senior of the next. He was still in College as late as the Logic Class of 1836-7, but a Barrister in London when, some years later, I climbed up no end of stairs to see him in Lincoln's Inn (I remember he put on his wig for me). Years later, again, he did marry Miss Tennyson; as, finally, years later still, he did die "in high office in Jamaica". The *Biographia* mentions, in connexion with John Macleod Campbell of the famous Row Heresy, the name Alexander Scott. I am inclined to infer from his silence otherwise (he is the Scott mentioned afterwards, however, as candidate for the Edinburgh Logic Chair) that Prof. Fraser was not aware of what Scott was to Ker. This Scott was to us, students of Glasgow, A. J. Scott of Woolwich; and we had an enthusiasm for him, whether as Lecturer or Preacher. As the former we exclaimed with wonder that he was a διδάσκαλος, a διδάσκαλος, a teacher, a teacher indeed! As the latter he awed us into the deepest religious trust and absorption. Scott was the personal friend of Thomas Carlyle; and as principal of Owens College, Manchester, he was known in his proper quality in the end. He had married an aunt of Alan Ker's, and was consequently to him an uncle.

If Alan Ker was still in College when Edmund Lushington came to fill the vacant Chair of Sir D. K. Sandford; and if he heard, in the Inaugural of that most accomplished of Professors, for the first time, as I did, that new and so peculiarly ringing voice, he could never for a moment have had a thought that both Professor that spoke, and student that heard, should have, by-and-by, the pride to be brothers-in-law not only to each other, but to Tennyson himself as the ennobled brother of the brides. By the accident of his brother practising Medicine at Cheltenham it was that all this fell to the lot of Alan. But, as Tennyson's brother-in-law, Ker went to the West Indies, firstly as Puisne Judge to another Island, but eventually as Chief Judge to Jamaica. Had the young Fraser remained longer at Glasgow College than the one session, he might have earlier had, as friends beside him, the later Profs. Sellar and Shairp (not to mention others otherwise notable); as he might have heard, too, Prof. Buchanan calling up, in the Common Hall,

as prizeman, a Tom Taylor, and explaining that "Tom" was no familiarity, but a name genuinely baptismal and full: which Tom Taylor was afterwards the celebrated Tom Taylor of *Punch* and of so many pleasing and successful dramatic pieces.

But the student from Lorne did not return to Glasgow to remain for other sessions at the College there. He went to Edinburgh instead, and from the date 1834-5 onwards, Campbell Fraser was a name more and more to do it honour.

The two first chapters that follow here in reference to life for him in Edinburgh, are of much deeper concern for him than for it. Their substance is really the laying of the foundations of religion and philosophy on the part of the young man himself. The general mind of the city cohered with this: "Chalmers, the most eloquent of Scottish preachers, was at the head of a revived ecclesiastical life, through which Edinburgh was to become the centre of Church and State conflicts and disruptions, of which the final issues are still remote". This, as so characterised, may be referred to again; but, in the meantime, what we have to see is the vital influences it anew set aworking in the young mind which, as from his very first words in his book, conditioned it. We shall quote a few passages here that may prove keys:—

"At the end the world of the senses had receded; the world of living mind appeared to reduce it to subordinate reality. Causes independent of physical nature began to take precedence of the caused causes that depend mechanically upon certain antecedent phenomena. A dualism, partly suggested by Kant, was then coming dimly into view. 'There are two things, as Kant saw, which fill the soul, etc.—the Starry Heaven and the Moral Law. . . . The Moral Law departs from my invisible spiritual Self, and reveals an originating activity that is independent of my animal system, and of the mechanical causation empirically exemplified; and it issues at last in the mystery of teleological instead of mechanical causation in the heart of the universe. It was thus that I was led to reflect upon our conception of the infinity that is latent in all that is real. . . . It was now, too, that I began to see in our Common-Sense or Common Reason a Reservoir which holds for us in a latent state the *rationale* upon which human action and knowledge at last depend, and which it is the work of the philosopher to interpret.'"

If the reader will but complete this extract, he will wonder how Prof. Fraser has been able to construct for himself, ingeniously, out of Kant's Starry Heavens, on the one side, and his Moral Law, on the other, the two contrasting sides of Philosophy. This of Kant is known to everybody, and has been repeated scores of times. It is perhaps strange that those repeating it have never thought of quoting an older passage of Kant on the starry heavens with at least reference to the thinking mind, if not exactly literally to the moral law. Kant's *Natural History and Theory of the Heavens*, as probably now in most hands in the form of, and so assumed to be represented by, Prof. Hastie's translation of that celebrated production

under the title of *Kant's Cosmogony*, may partly, at least in these days, be the cause of this. For, while translating the two former parts of the writing, the late Reverend Professor, apart his class, may be fancied latterly rather to have flattered Physics and so somewhat slighted Metaphysics, and, as it were, in that regard felt disinclined to translate a whole, the Third and concluding, part of a work that Kant had entrusted to the Press as so important that, once for all exceptively for him, he had dedicated it to the King—a work in the general ear of rising importance, and so important, indeed, to Dr. Hastie himself that he is never done exalting it, and has even dedicated it himself, like Kant, to what he holds to be of most illustrious rank in science. Such a work, then, if translated at all, clearly deserved to be translated at full.

But, be that as it may, the passage I refer to occurs in, or can indeed be almost said even to constitute, the very conclusion of the entire work that is so signally in question. I translate it thus :—

"*In effect, if we have filled our minds with such thoughts as these, the aspect of the starry heavens on a clear night, awakes in us a joy which only noble souls feel. In the universal calm of nature, and in the peace of sense, the hidden faculty of the immortal spirit speaks to us indescribably, and breathes into us thoughts, which may be felt but not possibly expressed.*"

This passage, as italicised, in the original, is italicised here.

Thomas Carlyle, when, in the letter to me, that, from Kant's letters, made out Kant "small," he wrote asking me, who it was that called Kant *Zermalmender*, and where it was that the starry skies and moral law passage appeared; might really have been won over to Kant, had I but added to my answer the above quotation from said *Natural History and Theory* book!

Returning to the extracts from the *Biographia* in which it was by the allusion to the stars and the moral law that I was led to speak in that reference further, it is to be said that the passages in example are very far from exhausting the situation concerned; but they will certainly give some insight into the earnestly working mind of this most seriously interested young student. And all may be said to have gathered itself together and summed itself at last, for a time, in his two prize-essays, the one on Toleration, and the other on the Infallible Authority of the Bible. The reasoning that constitutes what we may suppose to be the substance of these two writings may be regarded as to some extent reappearing here in brief; and it is really admirable—honestly central, honestly comprehensive, honestly instructive. As that, and no less than that, it must be allowed to be properly and peculiarly valuable. To prepare himself, for example, for the latter essay his industry and sincerity lead him, so to speak, into the very confessional for themselves of all the Churches. He even attends the lectures of the Roman Bishop of Edinburgh in proof; and actually writes him an anonymous letter on his own difficulties: he was checked, he

says, by his (the Bishop's) lectures, and not encouraged "to look for the basis of religious certainty in the fallible hypothesis of an infallible ecclesiastical organisation"; and he is equally candid towards the other Churches—his own, for example, say, of "Books produced long ago in Judea," "What could be said in favour of the infallibility of this collection of revered books, as a substitute for the abandoned infallibility of the living Church?"

The *Biographia* is very full otherwise, as on the many friends, the various positions held, the events experienced, the journeys taken, etc., etc. One would like to name all this so interesting which it has been the lot of Prof. Fraser to meet, enjoy, suffer, or generally in life prove, but for the mere sketch of a review to welcome a work on its first appearance from the Press, this slight paper already grows long. Positively, with the *Biographia* in hand, it is with pain that I realise to myself the very bulk of most interesting material that must be left without a comment. The most momentous public event of Prof. Fraser's whole life in Scotland—the creation of the Free Church, namely—cannot now be adequately referred to, much as it is in evidence throughout the most important chapters of the book. It constitutes the life-excitement of the nation for many years. It was as a whirlwind in the public hall, and it agitated the hearth. It was loud on the streets, and it could almost be heard in the toll of the church bells. As it is said, "Ecclesiastical war had arisen in Scotland. . . . Scotland was in the throes of an ecclesiastical conflict" more and more flushed with every successive year of not much less than ten. Edinburgh, particularly, as we have also just seen it said, "was to become the centre of Church and State conflicts and disruptions—*of which the final issues are still remote*". Issues! and before what one such issue, do not men, good, the best, even stand now, appalled! This, as we write!

And, for the student from the manse, the son of the manse, how can we expect these years to have made him? For it was they that in very truth, and on the whole, did make him. They were those from 1833 to 1843, from his fourteenth year as a boy to his twenty-fourth as a man. It was these years—as has been said—that gave scope to the full formation of the first principles, the essential forces, that were innate in him—those in a word that concerned "the enigma of the universe". We have already seen extracts from page 59 that illustrate this, and they may be supplemented by many others not less strong that follow. These, in fact, are that in the *Biographia* which is most vitally pregnant for the *Philosophia*. This in the immediate neighbourhood, for example, tells: "At first I was apt to confound uninterpreted with interpreted Common Sense. I was also inclined to ask for logical proof of the trustworthiness of this offered guide." But anything like full quotation is quite out of place here. I must content myself with the few spiculæ in that reference already given—I, for my part, have been much struck by the forensic power with which, in

the discussion of main points, religious or philosophical, Prof. Fraser can set side against side, fairly at full, without a *soupçon* of fear or favour for either the one or the other of them. It is in this that I find both a deep-thoughtedness and a power of writing which I have not been slow to speak of elsewhere. In fact with such a gift of forensic argumentation, or say Parliamentarian argumentation, I have sometimes wondered that Prof. Fraser was not oftener seen publicly to the front during the Free Kirk storm But, of course, he had, there and then, an official place where, whether as Editor or Teacher, it was the silent pen that was natural rather than the voice from the platform.

And now, too, there were suggestion of his books; but the suggestion could be righteously redeemed only by books, and never by an article. The excellences which have been spoken of as to be found in the *Biographia* are all to be found in the *Gifford Lectures* also; and these of Prof. Fraser for Locke and Berkeley are the standard editions. Care, accuracy, industry characterise them eminently, and the small *Locke*, the small *Berkeley*, the small *Reid*, are quite charming little volumes and in their dimensions full. What strikes at first, in their case, is the ease with which they are written, and, secondly, the ready obligingness with which the application of the Publishers or their most competent Editor, has been acceded to; for, of course, no one's action precisely there could have been more valuable than his. This, naturally, of the *Berkeley* and even the *Locke;* but, if a Ferrier had lived to do the *Reid* should we have expected the same thoroughness, impartiality,—in a word, objectivity?

The friends we hear of in the *Biographia* are affectionately and discriminately spoken of. Some as teachers claim respect, admiration, reverence. They are such as Chalmers and Hamilton, for example. The former, Chalmers, "atoned," it is said, "for comparative mediocrity of learning by the eloquence and moral fervour with which he delivered magnificent conceptions"; and, no doubt, it is pretty well always in some such words that we have Chalmers described nowadays. Here, for instance, is another admiring old pupil who speaks: "He (Chalmers) woke up to see and feel that the spiritual interest was the sovereign one, and to that he devoted himself body and soul; but he was not much of a scholar or even a theologian". No; it was not in depth or originality that he *thought;* but it was in both—it was both in originality and depth that he *felt*. Another man may owe his will to his intellect; but Chalmers!—Chalmers, on the contrary, owed his intellect to his will. See him stand up in a barn, and fill the barn with Professors, students, ploughmen. Not a Professor there, and not a student there, no, nor yet a ploughman, but as he looks at the man, that living presence, that face almost, as it were, of inspired reality and truth, is caught up by him—is more and more caught up by him, as, at every flash, out and in, of that lightning swift right arm, like a God-compelled piston-rod, the heat accumulates,

till all around, roof, rafters, walls, the hearers, burn—burn round him—him in the midst—who no longer speaks, but is the focus, the centre, that himself—*burns!*

Prof. Fraser enjoyed a close intimacy with Hamilton, and speaks again and again of him, and ever in the highest terms. He "tended," it seems, "to transform inductive science of mind into ultimate philosophy of the universe"; and mentions as his "an extraordinary accumulation of Greek and mediæval as well as German erudition". Hamilton, it is even said, "was perhaps the most learned Scot that ever lived". That is certainly true: Hamilton's learning is attested by the presence everywhere in his pages of all the great names, ancient or modern—mediæval, too, even to the minutest, the strangest and the most unknown. True, Thomas himself can be quoted—is quoted (in *Memoir* by Veitch, pp. 120-128) with an error or two—largely in honestest praise of Hamilton, a praise that is liberally extended to face, figure, and personal charm, as well as, implicatedly, to his "swimming and other ruggedly athletic prowesses". Hamilton had all the precision, the exactitude of genius, literary genius. He had, like Chalmers, too, the decisive peremptoriness which there was no man to question: but it was of another order, and from a very different centre.

No doubt Prof. Fraser is the naturalised free man of the whole domain of philosophy; but perhaps we hardly need fear blame if we venture to associate his name with that of Berkeley. All through the now numerous and not exiguous volumes of his works there is ample testimony to no less a union. Especially we may point to the last and concluding chapter of the whole book for evidence to this effect. Throughout his whole career Prof. Fraser has never ceased in his deep-thoughted way to meditate, and in his own powerful style to write, on the philosophy of Berkeley. The Berkeley proposition is no longer the same in the hands of Fraser that it was in the hands of Berkeley. Unlike Ferrier, who, amusingly, just petulantly, *would not have* the odious word "subjective" applied to his idealism, Fraser's one labour has been to make what was subjective objective, to transform a crab on the shore into the Cancer in the sky.

It is only appropriately that Prof. Fraser dedicates his *Biographia* lovingly to his wife, the true companion of so many, and, necessarily, not a few arduous, years, of single-minded sympathy and trustful affection.

Altogether Prof. Fraser is to be congratulated on this so unpretentious autobiography of his, as yielding so pleasing a vista of a calm successful career, whether as thinker and writer, on the one hand, or as thinker and teacher, on the other.

JAMES HUTCHISON STIRLING.

Revue de Métaphysique et de Morale. Numéro spécialement consacré au centenaire de la mort de Kant, 12e Année, No. 3, Mai 1904, pp. 279-620.

This double Number of the *Revue de Métaphysique et de Morale*, which consists of some seventeen articles, contributed by French, German, Italian and English scholars, and exclusively devoted to the Critical philosophy, forms a splendid memorial of the centenary of Kant's death. It also contains a beautiful heliograph reproduction of a medallion of Kant by Mdlle. Standinger, which seems to be a close copy of the portrait so strangely discovered in Dresden in 1896. The *Revue* opens with a weighty and eloquent article by Natorp—"A la mémoire de Kant". Through Kant the German people first revealed a special talent for abstract speculation. When Leibniz had tried to define the national genius, he described its vocation as lying in the sphere of the concrete technical arts, and cited as confirmation the capacity of the German language for expressing the sensible and concrete. The Germans have certainly shown excellent aptitude for the practical organisation of life, but no one, reflecting on the great line of metaphysical thinkers from Kant to Hegel, and having in view the creation by German genius of modern music, the least material of all the arts, would now think of thus describing the national spirit. Kant, Natorp contends, carried into the domain of systematic philosophy the freshness and depth of spiritual insight which were so clearly manifested by the early German mystics, and which are characteristic features of German literature and art. That the great wave of thought which Kant set in movement has given a speculative cast to the national mind is shown, Natorp further contends, by the philosophical spirit which the German language now reveals, and which, as Leibniz so justly remarked, had not previously existed: "Et ainsi notre peuple tout entier ne le fête pas seulement parce qu'il est un Allemand qui a vécu parmi les Allemands, mais parce que la nation allemande a véritablement vécu en lui" (p. 282). Kant's philosophy is the philosophy of what the Germans call *Kultur*, of civilisation in the fullest sense of the word, and has taught the modern world to realise that the furtherance of this *vie d'or*, in which science, art, the moral and religious life, must each play their essential part, is the true object of philosophical reflexion.

The very brief article which follows—"Pour le centenaire de la mort de Kant"—is an extract from the preface to the fourth edition of Paulsen's *Kant*. It gives a suggestive summary of the main features of the Critical philosophy.

There are three articles which deal with the Transcendental Æsthetic. Cantoni ("L'apriorité de l'espace") seeks to separate what is true in Kant's view of space from false psychological assumptions. Drawing a distinction between the logical and the psychological *a priori*, he argues that though our notion of space is gradually formed through tactual, visual and motor experience, yet once

developed it must be recognised as logically *a priori*. This interpretation involves restatement of Kant's proof of the subjectivity of space, and also implies that understanding plays an essential part in its construction. Couturat's contribution—"La philosophie des mathématiques de Kant"—is much the weightiest and most important article in the issue. It is distinguished by remarkable fulness of knowledge both of mathematical method and of the whole body of Kant's writings relative to mathematics, and subjects Kant's fundamental positions in the Transcendental Æsthetic and in the section on Schematism to a very searching criticism. As the article is full of detail, I cannot do more than indicate in the most summary manner the main line of the argument. Couturat regards Kant's proof of the synthetic intuitive nature of mathematical judgments as resting on the gratuitous assumptions of the traditional logic. All judgments are not judgments of predication, nor consequently are complex concepts mere compounds of partial concepts. From the representation of the signs, 7, +, 5, we cannot derive the idea 12; but if we think 7 units and 5 units as united in a single number (and that is the meaning of the symbol +) we necessarily think the number 12. Kant, of course, replies by a distinction between combination and arithmetical addition. This combination of the two groups is not obtained by uniting in thought two partial concepts, as animal and reasonable, for instance, are combined in the total concept, man; but is a process of addition, and as such executes itself in and through intuition. This distinction is, Couturat agrees, just, but does not establish Kant's contention. The subject is not '7 and 5' but '7 + 5'; and Kant begs the question in assuming that the only possible mode of combining concepts is that of external union. The concepts of numbers cannot be defined *per genus et differentiam*, nor decomposed into logical factors, and just as little can they be combined by any method formulated in the classical logic. The conclusion to be drawn is not, however, that they are therefore synthetic, and must rest on intuition, but that the logic of predication requires to be supplemented by the modern 'logic of relations'. Number is not a schema, with an intuitive content: it is not successive enumeration, but is purely conceptual, consisting in simultaneous apprehension.

Couturat proceeds to criticise on similar lines Kant's treatment of geometrical reasoning. Geometrical demonstrations are all analytical, and the whole body of the science can be directly deduced from some twenty postulates. Couturat accordingly quotes with approval the statement of Mr. Russell, that what has ruined the Kantian philosophy of mathematics is not the non-Euclidean geometry, for that, as Couturat maintains, is quite in harmony with Kant's treatment of Euclidean space as a subjective form of intuition, but the logical reconstruction of Analysis. "La mathématique n'est pas liée à une nature particulière d'objets, mais est une méthode générale de démonstration et d'invention. C'est

précisément Boole qui a le premier 'réalisé' cette idée, et l'a formulée dans cette phrase lapidaire; 'Il n'est pas de l'essence des mathématiques de s'occuper des idées de nombre et de quantité'. Aussi l'on a pu dire, sans trop de paradoxe, que la mathématique pure a été decouverte par Boole. Et puisque nous célébrons des anniversaires, il nous sera permis de remarquer que le centenaire de la mort de Kant est le cinquantenaire de la mathématique pure; ce qui excuse suffisamment de n'avoir pas connu celle-ci" (p. 381).

Couturat also gives a brief criticism of Kant's treatment of the antinomies. As readers of his *L'Infini mathématique* are aware, he regards the notion of an actual infinite as perfectly consistent; and it is from this point of view that he attacks Kant's position. "On peut donc dire que Kant introduit lui-même dans la notion d'infini la contradiction qu'il croit y découvrir. . . . Dans tous les cas, les antinomies procèdent, non des notions propres de l'espace et du temps, mais uniquement de la notion de l'infini qu'on leur applique" (p. 378). This contradictory conception of the infinite is due to Kant's arbitrary introduction of the notion of time into number and magnitude, and therefore forms an indirect refutation of his conception of mathematical science. The following is Couturat's final conclusion: "En résumé, les progrès de la Logique et de la Mathématique au xixe siècle ont infirmé la théorie kantienne et donné raison à Leibniz. Si Kant separait et opposait entre elles la Logique et la Mathématique, c'est qu'il avait une idée trop étroite de l'une et de l'autre (p. 379). . . . Loin donc de reprocher à Kant d'avoir été trop mathématicien et trop logicien, nous lui reprocherions au contraire de ne pas l'avoir été assez, en un mot de n'avoir pas été assez rationaliste" (p. 382).

Couturat's article thus forms a valuable supplement to Mr. Russell's criticisms of Kant in his *Principles of Mathematics*. Both claim that these criticisms have been thoroughly confirmed by the recent developments of symbolic logic and of pure mathematics, and constitute 'a final and irrevocable refutation'. Possibly, however, this recent development of mathematical science may be capable of being otherwise interpreted; and I may therefore venture to state one objection that is suggested by the above line of argument. Couturat brings the discussion, so far as it regards Kant, to a very clear issue. Since few will care to deny that the traditional logic, with which alone Kant was acquainted, requires to be supplemented, the question to be decided is whether a 'logic of relations' can altogether dispense with the factual element of intuition. Much, however, will turn on the meaning given to intuition; and it must not be assumed, as Couturat seems to do, that it is purely sensible. As he himself observes, though only cursorily in a note (p. 367, *cf.* p. 354), Kant in the Analytic, following his usual *Krebsgang* method, revises the results of the Æsthetic, and shows that even in the apprehension of space and time understanding plays an essential part. Couturat, it is perhaps

possible to contend, does not sufficiently allow for this, and interprets much too literally Kant's earlier statements.

The next article, that of Milhaud, forms an excellent sequel to the preceding. It defines Kant's attitude towards mathematics, dwelling on the grounds, personal and historical, of his intuitional theory, and tracing the development of his views on this point. Milhaud also very justly emphasises the influence exercised by Kant's view of space and time, as formulated in the *Dissertation*, on the formation of his Critical idealism.

Hannequin, who treats of the Principles of Pure Understanding, shows himself a somewhat uncompromising follower of Kant. The *Grundsätze* he regards as thoroughly satisfactory, and as confirmed by the most recent results of physical service. If science is not to be a mere play with arbitrary hypotheses, and scientific truth a meaningless word, the understanding must be able thus to determine *a priori* the formal conditions, and the essential limits, of its procedure. The fixed nature of these fundamental principles, far from preventing, directs and inspires the continuous development of science. "Les 'analogies de l'expérience' sont remarquables par la sûreté et la solidité d'une construction spéculative qui n'a reçu des développements historiques de la science que des confirmations" (p. 415). Unfortunately Hannequin avoids raising the question which chiefly interests the student of Kant, how far Kant's proofs of the Analogies (as distinguished from the mere formulation of them) can be regarded as really satisfactory.

V. Basch's discussion of the use which Kant makes of the faculty of imagination in his theory of knowledge hardly faces the difficulties involved. Imagination, he says, is for Kant the 'guide and interpreter' of the understanding. There is difficulty in seeing how this statement can have any real meaning when the final conclusion reached is that imagination and understanding are two forms of the same faculty, in the one case working unconsciously, and in the other consciously. That conclusion is, at least as regards the constructive imagination, obvious to every student of Kant. The real difficulties—and of such there are plenty—arise after it has been recognised. Kant's empirical imagination would seem to correspond to association, and to imply an orderliness in the given sensations such as is entirely ignored in his constantly repeated description of the data of sense as a mere manifold.

I need only mention Eucken's eloquent article—"L'âme telle que Kant l'a dépeinte"—and pass to that of B. Erdmann. In a very closely argued paper—"La critique kantienne de la connaissance comme synthèse du rationalisme et de l'empirisme"—Erdmann raises in a very suggestive form some of the most difficult problems of the *Critique of Pure Reason*. Kant's chief disciples, especially Fichte, interpreted Kant's later works in accordance with the results of the *Critique of Pure Reason*, and the latter in the light of the apparent idealism of the first edition; and so came to the conclusion that though the conception of the thing-in-itself, the

transcendental object, is a problem necessarily involved in the limitation of our knowledge to sense-experience, it can receive no determinate answer. We can neither say that the thing-in-itself is possible nor that it is impossible. Erdmann proceeds to show that this interpretation is fundamentally erroneous. Kant's real view is that the concepts of pure understanding enable us to apprehend things as they are in themselves. And since every category is applicable to them, they may legitimately be conceived, not only as existing, but also as causes producing in us, by an intelligible causation, the given impressions of sense. "Kant postule donc, par suite de ce qui précède, non seulement l'existence d'une pluralité de choses, en général, comme choses en soi qui agissent sur nos sens, mais il est évident aussi pour lui, que nous pouvons et devons penser ces choses en soi par l'entendement pur, et que nous les pensons par l'entendement pur comme elles sont en soi. Kant, à ce point de vue, ne se place pas seulement sur le terrain du rationalisme leibnizien, mais il adhère à la vieille conviction rationaliste (au sens élargi), qui remonte jusqu'aux débuts de la pensée grecque. . . . Kant est d'après les *principes* de sa *Critique de la Raison pure* un *rationaliste métaphysicien*" (p. 458). What, according to Erdmann, primarily distinguishes Kant from his predecessors is his fundamental distinction between thinking and knowing. He was the first to raise the problems involved in the explanation of *sense*-experience. The critical problem, how *a priori* concepts can relate to objects, really means, how can *a priori* concepts through which we think things-in-themselves enable us to know the sensible objects of the phenomenal world. In answering that question, Kant definitely breaks with the rationalism of his predecessors, and transforms Leibniz's logical distinction between sense and understanding into a distinction of kind. If we can only know the objects which the understanding thinks, when they are given us in intuition, it is a fact of primary importance, one which rationalists had ignored instead of emphasising, that *all* our intuitions are sensible. For there follows from this the all-important conclusion, that the categories, the conceptions of things in themselves, have no other application in the knowledge of things, than their application to the objects of experience, that is to say, to phenomena. Though the categories are conceptions of things in themselves, they are fruitful only as conditioning our sense-experience. And thus, without giving up his rationalistic premises, Kant arrives at practically the same delimitation of knowledge as Hume reaches by way of empiricism. Erdmann concludes by indicating how Kant's argument in the *Critique of Practical Reason* may be interpreted from this point of view. I may offer one criticism. Erdmann's use of the term 'categories' is somewhat confusing. Riehl's view that the categories, in their distinction from the logical forms of thought, involve a reference to space and time, and therefore are really identical with the schemata (the latter being simply delayed definitions of the categories), seems to me

to afford a clearer statement of Kant's position. The principle of causality, involving the notion of temporal succession, is only applicable to sensible phenomena. We must think things-in-themselves not as the *causes* of our sensations, but only as their ultimate *ground*, thus leaving completely undefined the relation in which our sensations stand to them. Similarly things-in-themselves are not to be thought as substances—for substance is only conceivable as a permanent in space, and ultimately as material—but more indefinitely as subjects to which unknown predicates belong.

English students of Kant are worthily represented by Mr. Blunt, who gives a very convincing statement and defence of Kant's Refutation of Idealism. The expression 'ausser mir,' to which so much objection has been taken, is thus commented on: "Cette expression ambigue 'en dehors de moi,' qui se présente au cours de la Réfutation, est une allusion évidente à la notion cartésienne du 'monde extérieur'. Kant est innocent de l'erreur qu'on lui a reprochée: par 'en dehors de moi,' il ne veut pas dire 'en dehors de mon corps'. Le monde extérieur en question est spatial, mais il comprend mon corps. Notre espace n'est pas seulement 'en dehors pour' ma conscience, il est 'en dehors d'elle,' en ce sens qu'il ne rentre pas dans le moi objectif, comme constituant une des psychoses qui en sont le contenu, et par suite est indépendant de son ordre temporel à une dimension" (p. 484). Or as Mr. Blunt says in another connection, things in space are "'extérieur' a moi en ce sens qu'il est indépendant de mes *psychoses* individuelles, celles-ci étant déterminées par rapport à lui et non pas inversement" (p. 483). The justification for this lies in Kant's view that, though the understanding makes nature, "ce n'est pas mon entendement en tant qu'individuel, c'est la structure mentale normale chez moi et mes semblables, qui imprime au donné ses formes et ses catégories; l'expérience ainsi organisée se réfléchit alors, d'une manière plus ou moins adéquate, dans mes perceptions individuelles" (p. 484). This conception of space and the categories as immanent in the phenomenal world 'external to' the individual raises, however, all the main difficulties of the *Critique;* and Mr. Blunt concludes by indicating what he regards as satisfactory, and what is unproved, in Kant's argument.

There are three articles upon Kant's ethical views. Those of Fouillée and Boutroux may be taken as representing the two sides of the truth. For while the former makes a vigorous, and somewhat damaging, attack upon Kant's theory, the latter gives a charmingly sympathetic account of its main features, insisting on their value for present-day thinking. Th. Ruyssen's article—"Kant est-il pessimiste?"—is a reply to Hartmann, who has claimed Kant as the father of modern pessimism. Ruyssen has no great difficulty in showing that Kant's 'Christian pessimism' does not exclude a genuine moral optimism. Our duty traces out for us the goal of our hopes, and, as Kant also believes, history confirms their legitimacy.

It is disappointing to find only one article devoted to the *Critique of Judgment*, and that a very slight contribution of seven pages. M. Delbos brings out, however, in a very clear and concise manner, the harmonising tendency which gives unity to the extraordinarily rich and varied contents of this *Critique*. "Venue après les deux autres Critiques qui définissaient en formules objectives, l'une les conditions de la certitude scientifique, l'autre le principe de la morale, elle en est comme la 'synthèse subjective,' par laquelle se consacre sans doute une fois de plus l'impuissance de l'esprit humain à déterminer intellectuellement l'absolu, mais aussi sa suffisante capacité de concevoir dans un ordre harmonieux, selon une hiérarchie régulière, tout ce qui theoriquement lui est accessible et tout ce qui pratiquement l'intéresse" (p. 558).

H. Delacroix writes on "Kant et Swedenborg," and Riehl on "Helmholtz et Kant". Both, especially the latter, contain much interesting matter. The concluding article by D. Parodi is on Renouvier's criticism of the Kantian categories.

NORMAN SMITH.

A History of European Thought in the Nineteenth Century. By JOHN THEODORE MERZ. Vol. II. Edinburgh: W. Blackwood & Sons, 1903. Pp. xiii, 807.

THERE was a time, not so long ago, when the purely scientific man scoffed at the philosopher, and when the latter looked down from his mystic heights on the plodder after material facts. In those days we fancy most philosophers accepted the Baconian as the true scientific method, on which there never had been and never could be any improvement. On the contrary, scientific thought has developed through the ages by an interplay of imagination and knowledge,—speculation, hypothesis, theory, suggesting in ninety-nine cases out of a hundred the line of experimental research. Galvani's discovery was perhaps a happy accident; but Volta's development of it physically was a reasoned thing. Oerstedt, imagining that a wire heated by a current might have some effect on a magnet, discovered the magnetic character of the electric current. Occasionally no doubt, as in the discovery of the Röntgen Rays and Radio-activity, the facts discovered were new and bore no distinct relation to the momentary views or desires of the discoverer. But it remains unchallengeable that nearly all the great epoch-making advances of the nineteenth century have been effected by minds revelling in speculation.

All this is well brought out in the second volume of John Theodore Merz's *History of European Thought in the Nineteenth Century*. The opening chapter (Chapter vi) on the kinetic or mechanical view of nature traces the growth of the conception of the ether as a necessity in physical theory. The strenuous

attempts to supply if possible a dynamic basis to Fresnel's grand theory led to the mathematical development of the kinetics of vibratory motion; and out of this grew the recognition of the pregnant principles of isochronism and resonance. The principles are referred to by Mr. Merz; but we do not know of any popular writer who has dwelt upon their importance. Next to the all-embracing doctrine of Energy there is perhaps no principle so fundamental and so far reaching as that of resonance. Borrowed from the department of Acoustics the word and especially the idea enter intimately into the discussion of the interplay of vibrating systems. If there be any truth in atomic grainedness of matter the familiar phenomena of reflexion and refraction of light are the result of resonance. Emission and absorption of radiant energy in all its forms—actinic, luminous, thermal, electric—illustrate the same great principle, which indeed strikes deep down into the very constitution of the atom. Maxwell in his clever rhythmic account of the Lucretian atom writes:—

> So treading a path all untrod the poet-philosopher sings
> Of the seeds of the mighty world—the first-beginnings of things.
> How freely he scatters his atoms before the beginnings of years;
> How he clothes them with force as a garment, those small incompressible spheres!

But the modern physical atomist has broken loose from Lucretian moorings. The material atom is now a minute cosmos, a whirling vortex of countless corpuscles forming stable systems like Saturn's rings of satellites. When a periodic disturbance agitates one of these microcosms, energy is absorbed in greater and greater measure the more nearly the period of the disturbance approximates to a natural period of vibration of the system. This is the principle of resonance, which lies dynamically at the basis of dispersion, normal and anomalous, of fluorescence, of phosphorescence, and of spectrum analysis. The historic development of the notions underlying the theory of exchanges is well expounded by Mr. Merz, although we think that Balfour Stewart deserves in this connexion a higher place than a passing mention in a footnote. Nevertheless the footnotes, which abound in quotations from authorities, form one of the most valuable features in the book, showing how widely the author has read and with what care he has striven after catholicity and accuracy.

Closely connected with the kinetic view of nature is the Statistical View, to which the whole of Chapter xii. is devoted. It came strongly to the front in the development of the kinetic theory of gases; and to Maxwell especially is due the general discussion of its importance in physical phenomena. For not only does the principle enter into the kinetic theory of matter, but it is of fundamental importance in all sense sensations. Whatever be our ultimate view of existence, sensations are after all the facts we have to deal with. Now the eye does not see by means of a

single impulse, but in virtue of a train of waves. All we know directly is the *average* effect of a myriad of these. Not only is there a *time* average of impulses but there is a *space* average over the surface of the real receiving organ. The apparently steadiest things are so statistically. The probability is that the evidence of our senses, direct and indirect—and we have no other "material" to guide our thoughts—bears as little resemblance to the physical reality as the printed word does to the idea it embodies. This view of the interpretation of nature has been gradually forced upon the scientific mind during the last century; and it is here where the "mental" and "natural" philosophers find common ground. Corresponding to this view the connotation of the familiar phrase "a Law of Nature" has changed fundamentally, at least to thinking minds.

In Chapter vii. Mr. Merz gives an admirable account of the development of the doctrine of Energy and of Electrical theory, leading up to the modern electron or electric atom theory, which may now be regarded as having established itself as a working hypothesis of great suggestiveness. The philosophical importance of this trend in physical thought is referred to at the close, and a further discussion promised. This will be looked forward to with interest. For there is something uncanny in the thought that the physical view of nature is built upon the "shifting sands" of whirling and streaming electrons with the aid of a mathematical scaffolding admittedly imperfect.

This at once leads to the question as to the validity of our mathematical methods; and if one portion of Mr. Merz's second volume is more worthy of praise than another it is the last chapter on the development of mathematical thought. We are not aware that Mr. Merz would regard himself as a mathematician; but only a man with mathematical faculties could have written such a clear account of the recent progress in mathematical thought as we find presented here. The complex variable, descriptive and projective geometry, the principles of continuity, duality, and reciprocity, the theory of numbers, of forms, of operations, of groups, hyper-space and non-Euclidean geometry, are among the subjects treated. It almost seems as if there were a power outside of himself forcing the mathematician to introduce conceptions essentially foreign to the axioms on which his science is based. For example in ordinary algebra we early learn that, as a necessary logical consequence of the original definitions of $+$ and $-$, the product of two negative quantities is itself positive. Hence there cannot be any quantity which multiplied by itself gives a negative square. Yet one of the simplest of quadratic equations compelled the introduction of the unreal, the imaginary, the impossible square root of -1. From the arithmetical point of view $\sqrt{-1}$ is an absurdity. It is meaningless as a quantity. But it soon appeared that it could be interpreted as an operation effecting a change of direction. Moreover as a symbol in analysis $\sqrt{-1}$ became all important, leading

immediately to a complete symmetrical theory of equations and algebraic functions, and greatly facilitating the solution of problems in applied mathematics. In fact the complex number, originally introduced tentatively and apologetically, now rules the whole realm of algebra Even yet, in spite of the infinite value of the thing, no satisfactory philosophical ground can be given for its introduction. Why should a science based on the principle of representing things by symbols require the introduction of a symbol which corresponds to no thing? We can no doubt find intellectual satisfaction in extending our algebraic and originally arithmetical processes to operations; but as we do so we are compelled to modify these very processes. Multiplication, for example, becomes what might be called polar, the value of a product depending on the order of the factors. By such imposed limitations we enrich the significance of a process and extend our methods.

We can but refer to the wide-reaching inquiry into the foundations of geometry, an inquiry which has led to the conception of different kinds of space each with its own consistent though to us unimaginable system of geometry. In the effort after a rigorous foundation of geometry, the mathematical mind has, in short, demonstrated the *possibility* of a kind of space whose properties it is incapable of imagining. The unthinkable and the impossible are not convertible terms.

It is not possible to do more than touch upon the many phases of thought brought forward in Mr. Merz's pages. The difficulty in undertaking a history of scientific thought is to decide what to leave out. Certain broad issues are obvious to every one, such as the doctrine of energy and thermodynamics, the electromagnetic theory of light, the relation of ether and matter; but, in the discussion of these, secondary questions arise in the sifting of which judgment must be exercised. And in this respect Mr. Merz's history is worthy of our highest appreciation. As already pointed out we think the author has excelled himself in the presentation of the modern trends of mathematical thought. All men with any claims to intellectual power know a good deal about energy, electric waves, natural selection, and variation; but to the vast majority projective geometry and function theory are absolutely unknown, "number" suggests no deep philosophical discussion, and "space of four dimensions" is the one hyper-spacial phrase possessing any familiarity. Mr. Merz has done a great service by giving the intelligent reader who has had no training in the higher mathematics an opportunity of becoming familiar with the subtle searchings of some of our keenest intellects.

C. G. Knott.

Biological Section.

In passing from the mechanical and physical views of nature to what may be roughly called 'biological' views, Merz emphasises

the contrast between the abstract study of natural objects and phenomena—a study which introduces us to "the general relations or laws which govern everything that is or can be real,"—and 'those sciences which study the actually existing forms as distinguished from the possible ones, the "here" and "there," the "where" and "how," of things and processes; which look upon real things not as examples of the general and universal, but as alone possessed of that mysterious something which distinguishes the real and actual from the possible and artificial'. This contrast between abstract and descriptive sciences raises the difficulty that in pursuing the latter, especially in their kinetic or physiological aspects, the investigator finds himself 'abstracting' just as the chemist and physicist did. Furthermore, the contrast leads the author to an extension of the concepts of the 'morphological,' the 'genetic' and the 'vitalistic' views in a manner which may surprise the morphologist, the geneologist, and the physiologist as they actually exist. For it follows from the classification adopted that the morphologist, for instance, has crystals and minerals, why not also mountain-ranges and river-courses, within his province. To this he may object that what he took to do with was the study of the static relations of *organisms*, that, illogical as it may be, he does not find a long lost brother in the crystallographer or the mineralogist, and that the history of scientific thought in regard to the morphology of organisms must not be mixed up with the doubtless analogous study of the morphology of mineral forms or mountain-ranges, which involve quite different methods and disciplines. On the other hand, we may recall Huxley's confession that he was not really so much interested in the fact that the animals he so skilfully anatomised were once alive, as in the general problem of their structural 'make up'; he was, he said, an engineer *in partibus infidelium*. There is much to be said on both sides.

The author points out, that "one of the greatest changes which the present age has witnessed has been the breaking down of the old landmarks and of the stereotyped divisions (between the sciences) which existed in the beginning and all through the first half of the (nineteenth) century"; and thus he feels a somewhat slack interest in the much-discussed problem of the classification of the sciences, as detailed, for instance, in Prof. Flint's recent erudite treatise.

"In the perpetual variety of change the morphological view tries to define those recurring forms or types which present themselves again and again, towards which all changes seem to revert; thus bringing some order into what would otherwise be disorder and confusion." "On the other side, the genetic view deals with the transit on from one form to another in the course of time; takes more interest in movement and in the process and function; and seeks for their probable laws and regularities." This introduction to the morphological view of nature is admirably put, but the

historical difficulty remains that the logical distinctions are not, in point of fact, always applicable to the work of the masters who have made our sciences of organisms what they are. Gegenbaur, for instance, perhaps the most illustrious comparative anatomist of the second half of the nineteenth century, was conspicuously a pure morphologist, and yet his whole work—though he seldom said a word about evolution, is pervaded by the genetic idea. A descriptive anatomist, of course he was, and we have not his equal now, but his whole morphology was evolutionist.

Of this difficulty Merz is well aware, and his chapter shows in an interesting way that many of the paths of investigation followed by the morphologists led them into new atmosphere and disclosed horizons much wider than they had dreamed of. Thus there were explorations in the graveyards of the buried past and excursions to far off lands; forms were studied *in situ* and living things visited in their habitats; the microscope revealed the innermost structure of organisms and an enormous creation of minute beings invisible to the living lens by itself; the study of life-stages began to fascinate and morphology became morphogenesis; the great architectural plans on which living creatures are constructed began to stand out clearly, the relatedness and apparent recurrence of definite types could not but arrest attention, and although 'the relationship was mostly looked upon as ideal, not real,' there were isolated morphologists before 1859 who were not ashamed to call themselves geneologists. Prof. Patrick Geddes, with his usual illuminating insight, has pointed out that the progress of morphology as such—from Buffon to Bütschli—is a story of more and more deeply penetrating analysis, from the external form and symmetry of the organism to the internal architecture of the organs, from the organs to the tissues which compose them, from tissues to their elementary units or cells, and from cells to the living matter itself. This summary gives a crispness to the historical retrospect, of which Merz might, we think, have taken more advantage, but it must be remembered throughout that he is dealing not with the history of science but with the history of scientific thought, and that the mood or logic of the morphological analyst is the same whether he is studying an elephant or a Bacterium, a fossil or an embryo, a liver or a nuclear complexity of one of its cells. In passing, we doubt the wisdom of speaking of the period 1800-1860 as dominantly morphological; the geneological and physiological disciplines were often prominent during these decades, and morphology was never stronger than it is to-day.

There is no finer chapter in the book than the ninth which deals with 'the genetic view of nature,'—the view which seeks to give answer to the question, How have things come to be what they are? To Leibnitz with his 'Protogæa,' to Kant (influenced by the cosmical theories of Thomas Wright of Durham) with his 'Natural History of the Heavens,' to Laplace, forty years after

Kant, with his 'nebular hypothesis,' important initiative stimuli are due, but their attempts 'belong to the Romance of Science'. More solid contributions to a real genetic theory of the things of nature are to be found in the researches in palæontology and embryology which are associated with the names of Hutton and Lyell, Wolff and von Baer. Thence, after a glance at Oken and his 'Natur-Philosophie,' the author reaches the pioneers of Evolutionism, such as Lamarck and Treviranus, and finally brings us to familiar ground in the work of Darwin and Wallace, Haeckel and Spencer. The story has been often told, but never better, for the author's unusually broad outlook enables him to give due place to the many collateral influences, *e.g.*, from physics and chemistry, which helped the doctrine of organic evolution to win conviction as a modal formula for the universal "Werden and Vergehen". In reference to this chapter we may call attention to the appreciation of the interesting and unique position which Karl Ernst von Baer occupies in the history of science and thought.

"It is from and through organisms, the living things of nature, that we first learnt to look upon the whole of nature as having a history and a life. Imperceptibly we have been led to study life, the genesis of things, on the large scale and in the abstract, and in so doing have lost sight of the life which goes on around and near us. Both the morphological and the genetic views of nature started with a biological interest, but have gradually lost sight of it." Such considerations lead the author to 'the vitalistic view of nature' which inquires into the actual processes of life, though still without any secure convictions as to what 'life' is. As was to be expected, much of his physiological chapter is concerned with the see-saw of the two schools of so-called materialists and so-called vitalists. "After the age of Bichât, and largely through his influence,—*i.e.*, through the cultivation of anatomical researches, —the pendulum swung in the direction of proving more and more the parallelism of organic and inorganic processes. It reached its maximum swing in that direction about the second third of the century. Since then it appears to have again returned in the opposite direction." It is this movement which the author follows with particular care, showing that "the stronghold in which the innermost secret of life is intrenched has been attacked from all sides by all the processes and methods of the mechanical, physical, and chemical sciences, and how it has persistently refused to surrender". The chapter discusses the influence of Lavoisier, who applied the theory of combustion to living creatures; of Liebig, who popularised the conceptions of "Stoffwechsel" (metabolism) and "Kreislauf des Lebens" (the circulation of matter), and was one of the first to look upon nature as an economy or a household; of Claude Bernard and Johannes Müller, of Lotze and Du Bois Raymond, and of many others. Finally, through Virchow and others, we are led to the idea of the continuity of generations,— a continuity of organisation and of metabolic processes—and

thence to Weismannism and the all-embracing dynamic outlook on organic nature which this implies.

Pausing in his fascinating history, the author asks if we have come nearer an answer to the question, What is Life? "At one time, for a generation, which is passing away, we apparently had. But a closer scrutiny has convinced most of us that we have not." We are far from being able to translate into mechanical categories the organisation, the metabolism, the adaptation, the selection, and similar formulæ with which we work. "The spectre of a vital principle still lurks behind all our terms." And this leads the author naturally to his chapter on the psycho-physical view of nature, which has to do with the mental, inner, or self-conscious side of the higher forms of living matter, and discloses a new world within the old one, the microcosm in the macrocosm. This will obviously lead on to the third volume, dealing with philosophic thought in the nineteenth century. The twelfth chapter discusses the application of statistical methods to such phenomena as those of variation and heredity—a profoundly interesting and important subject, but we should not have thought that it was worthy of being dignified as 'the statistical view of nature'. It is only the application of a special technical method, and promiseful as its results have been it does not appear to us a new point of view.

There are, the author says, two grand and complementary conceptions which either underlie all scientific inquiry or result from it,—*Order* and *Unity* (in its most impressive form, *Individuality*). He finds these two conceptions dominant in Biology as also in Physics. "The sciences of life have forced upon us more and more the conception not only of orderly arrangement but also of a unifying principle—that is, Individuality." The concept of Order is not merely static, it is progressive, and it leads the scientific mind through the idea of continuity to that of Unity. In other words, the biological concepts of Order and of Unity combine in a concept of Evolution.

As we have given much attention to the history of Biology, since the time of Buffon, we may be permitted to record our appreciation of that part of Merz's volume which deals with the development of biological thinking. The author's erudition is marvellous, yet amidst the trees he never loses sight of the wood. Unembarrassed by his wealth of material from original sources he advances serenely and sanely, disclosing step by step the magistral march of scientific progress. His general ideas are so akin to our own that we naturally find them hard to criticise, and his historical sketch is so much more comprehensive and consequent than that to which we attained that we cannot do more than express our grateful admiration. There are many students—of science, philosophy, and history—who wish and need to know what the trend of biological science has been during the past century. They will find this and much more in the relevant chapters of this remarkable work, which it would be faint praise to call "Whewell up to date".

J. Arthur Thomson.

Autobiography. By ALEXANDER BAIN, LL.D., Professor of Logic and English, University of Aberdeen. (With Supplementary Chapter.) With Portraits. London: Longmans, Green & Co., 1904. Pp. xii, 449.

THE Experiential Philosophy, in its British phase, now reckons among its historical documents three autobiographies by three representative men,—J. S. Mill, Spencer, Bain. As one naturally thinks of the three men together, so one naturally compares the features of their autobiographies. Each book is an original contribution to the history of a moment in philosophical history. Each book is as individual as its author. What we had inferred from the other writings is now laid bare authentically to us here,—sometimes to our gratification, sometimes to our disappointment, always for our acceptance as that which the writer chose to give us. And the motives that impelled to the writing of these self-records seem to have been of the most various kind. But surely in none of the three cases was the expression of any motive needed or expected. That Mill or Spencer or Bain should have thought it worth while to write, were in itself enough. An apology is superfluous. Without these three books we should be at least ethically, if not intellectually, poorer. Yet in estimating the quality of the results, we must have regard to the professed motive for writing. Here I am concerned only with Bain, who in his Prefatory Note sets forth with his known precision not only his reasons for writing, but also certain fundamental principles that might serve for every man important enough to deserve an autobiography.

To acknowledge indebtedness, to indicate the stages of mental growth, to reflect and cast light upon his surroundings, to present a critical and consecutive view of his writings, to give a chronology for such after record as may be desired and for easier reference now,—these were his objects in writing. And they are adequate. In carrying them out, Bain is simple, sincere, unemotional, severely objective, non-egotistical. He was concerned to state the essentials of his intellectual growth, not to paint an interesting literary portrait. Those accustomed to the high colour of the popular autobiography will be occasionally repelled by the coldly critical record of fact. But every fact is a contribution to a great life history. And if the words themselves are unemotional, the wide range of experience they indicate are proof of a long life full of living interests. It is true he had his feelings under control. To this Utilitarian the pleasure of the moment was never a reason for action. But if we glance through the names here mentioned or referred to in detail, we find that he was in intimate touch with every great movement in politics, in education, in religion, in philosophy. In London, he consorts with Carlyle, Lewes, Mill, Chadwick, Spencer, Grote, Darwin, and many others. In Paris, or elsewhere on the Continent, he meets Comte, von Mohl, Helmholtz, Wundt, and how many more. He goes along the usual routes of travel. He visits

the birth-place of Goethe. He visits the home of Spinoza. He has his admired pupils. He has his passionate preferences. All this is easily inferable from this *Autobiography*, but on one condition, that the words are taken literally and at their full intellectual value. Bain's style is not in the accepted sense "literary". It aims at one main quality, clearness, and so much it does everywhere achieve. But the "feeling-tone," so easy to the literary artist, we miss here, and if we would recover it we must recall the charm of his voice and elocution. He could touch the dullest sentence into beauty. He could create the right atmosphere for every variety of composition. The silver voice, the keen grey eye, the mobile feature, the telling gesture, the whole perfect utterance,—these go with me through every line and sentence of this book. Much of it I have heard in the walks at his home in Aberdeen or in the longer walks by the river or beyond it. For me the words live again, but I feel that to the stranger they may not suggest the richness of the spoken utterance. None the less will the book remain as a sufficient narrative, telling in a hundred indirect ways the history of a great intellect and a great will.

MIND is concerned mainly with Bain's psychology and philosophy in their final and developed form; but their beginnings are a relevant gloss. Bain was born on the 11th of June, 1818. His father was a stern Calvinist of the most rigid type. His mother, in spite of an asthmatic affection, was "vigorous, active and most industrious," and untiring in duty. The father's "unflinching will" and the mother's unflagging industry and conscientiousness were obviously inherited by the son. In no other way can we explain the long record of good work disclosed to us. But the intellect was early seen to be above the normal. The atmosphere was not kindly, but the life of labour and poverty was not without its intellectual opportunities. About the age of three Bain went to a dame's school. Later, he attended other schools. "He found that I was able to enter upon Algebra after having done Arithmetic, and set me to work accordingly at the age of about seven" (p. 5). He was doing quadratic equations then. He began Euclid, but up to to the age of nine seemed to make little progress in it. At eleven, he "left school for good". Later, at the age of sixteen, he went "through the first book of Euclid at a two or three hours' sitting," next day, the second book and part of the third, and, in other six days, he had gone through the whole of the twelve books and the "data". And this without assistance and without resting from his hard day's labour at the loom. The subsequent studies in mathematics maintained the same swift pace. The mathematical bias was clear and survived through the first part of his University curriculum, but was soon submerged in the stronger bias towards logic and psychology. Doubtless, the early mathematical discipline coloured his whole thinking in the philosophical subjects and perhaps laid the foundations of the unrelenting stringency of expository method that marked all his teaching and writing. He had, too, a distinctly

strong faculty for physics and the concrete sciences; but from his earliest excursions in theology to his latest article, the psychological interest is unmistakable and at a relatively early stage became all-absorbing. In spite of his liking for administrative work, he resigned his office at the Board of Health because he knew he "could do something better" to realise his ambitions. He went from one occupation to another persistently, until at last he found in the Professorship of Logic his true medium. The *Autobiography* is largely made up of the story of his efforts at once to maintain his intellectual independence and to secure an audience for his doctrines. How successful he was in both his long list of productions demonstrates. He regulated his daily life with a care that would have been morbid had the perfect sanity of it not been so abundantly proved by his length of days and the high quality of his thinking even to the end.

The analytic faculty seems to have been strong from infancy onwards. As a child, he took "everything seriously and to the letter". He was, he once told me, extremely impulsive and suggestible. The seriousness and the readiness to act on suggestion are correlatives. But he tells us that, at a very early stage, he was ready to see contradictions and was difficult to satisfy in argument. The same mental peculiarities survived infancy and became, indeed, his leading characteristic. The note of his life was the subordination of every feeling to the search for intellectual clearness. In the Moral Philosophy Class, when normally he should have been taking notes, we find him working out in his mind the laws of Association. Already, he had grasped the importance of a sound expository method and held that by sheer analysis we may facilitate discovery. He claimed to have anticipated some of Faraday's later results in magneto-electricity by setting down every inference possible from his earlier experiments Among his earliest addresses he discussed the law of Similarity. Thus, in his student years or immediately after, he had already made himself familiar with the difficulties of method and had taken certain initial positions in psychology. Nothing was an unsought result. He was continually disentangling and re-piecing. This had become and remained his dominant activity. Doubtless it was this readiness of analysis, supported by such comprehensive knowledge of contemporary science, that commended him to Mill, whose *Logic* bears evidence of Bain's service. At the age of twenty-two, he had come to know Comte's *Cours de Philosophie Positive* and when he studied Comte in detail later, he naturally found in him fresh support for his own essentially positive method. The Comte Society afterwards founded in Aberdeen took up the study of both Comte and Mill. Thus we see the beginnings of Bain's logical, psychological, and ethical doctrines. In none of them was he a slavish follower either of Comte or of Mill. The detailed analytic study of every serious work put before him was always the basis of fresh departures.

In 1844, we find Bain at work on the physiology of the senses He "had sketched the muscular sensibility as an independent sense" (p. 165) and had "got together materials for the classification of the senses". But the *Senses and the Intellect* was not published until 1855. So far as one can see, he had mastered every important work bearing on the problems raised in that book. What strikes one as amazing is that it should contain so much that is essentially modern and still remains, in some form or other, material for discussion. Perhaps its originality would have been less had the academic training been more prolonged or more scholastic. It is amusing to note that, in a paper read in 1844, on "The Definition and Classification of the Human Senses," in which the muscular sense and the organic sensations were worked out in some detail, the enumeration of the "organic sensibilities" was "considered a fair theme for witticisms of no very high order" (p. 172).

Did space permit, it would be instructive to follow the growth of some other doctrines that ultimately took a leading place in his books. For instance, his doctrine of Spontaneity was suggested by Sharpey's lectures on the brain and nervous system. "His exposition contained the most advanced views of the time. In particular, he gave a *résumé* of the nature of the nerve force, introducing some speculation of Faraday on its characters, as illustrated by his electrical researches. I did not preserve the exact tenor of the speculation; but it operated upon my mind in the way of suggesting the doctrine of Spontaneity as a necessary supplement to the recognised circle of the nervous current from sense to movement" (p. 219).

Of Bain's attitude to the Evolution theory, one word. He always felt that whatever the evolutionary history of experience might turn out to be, the growth of knowledge in the individual would always be an indispensable preliminary for analysis. He has been accused of not making full use of the evolution conception, but his plan, in the two large books, was quite independent of it. It is supposed that the theory of Heredity helped to bridge the gap between the opponents of "innate ideas" and the through-going experientialists; but when we look into this, we find that the theory of heredity in question involves the inheritance of individual acquisitions. Spencer's so-called "reconciliation" hangs on this theory. But if the Weismann doctrine be correct, Bain's misgivings as indicated in this volume and in the *Emotions* are more than excused. He never took Darwin's pangenesis seriously as more than a mere working hypothesis, and the old doctrine of heredity was accepted only provisionally. If one reads carefully the criticism of the evolution positions in the *Emotions and the Will*, one sees that most of Weismann's general criticisms were forestalled by that analysis. Heredity must be made a coherent doctrine biologically before it can be used conclusively to establish all that Spencer demanded of it. The *Autobiography* shows that it was not want of open-mindedness, but want of evidence, that made Bain hesitate.

Of the personal references, one must say that they are brief to a degree. Of real characterisation there is little. The meeting with Comte is an exception. The want of humour is selected for special note. Bain himself had the keenest sense of humour,—a thing we could not infer from his writings. Perhaps, the notes already embodied in the criticism of J. S. Mill accounts for the passing references here. But one looked for something more about Carlyle and Spencer, if not also about Lewes and Graham and Chadwick. But Bain had not the disposition to record personal impressions in the somewhat garrulous way that Spencer affects, and his intercalated moralisings are practically *nil.* In conversation, he was always ready with happy reminiscences. Every fact bears on some essential aspect of his own work and the whole makes a good basis for a biographical study, and for a philosophical study of the period that produced him.

The tale of his efforts to obtain a University Chair are full of the usual rejections for irrelevant reasons. Fortunately, a strong man, Sir George Cornewall Lewis, followed his own judgment when the true opportunity offered, and philosophical work in Scotland was thereby the richer.

Prof. Davidson's Supplementary Chapter is to me somewhat dissatisfying. Doubtless, as intimated in the note at the beginning, Prof. Davidson was justified to a certain extent by the moral implication of the "pencil note" to the "effect that the time has not yet come for constructing such materials into history or biography". But that need not have prevented some indication of Bain's later views on questions more serious than the bowling-green at Ferryhill or even the details of the Arts Curriculum. There is nowhere anything to illustrate his perfect religious toleration, or his modern attitude to religious institutions, although illustrative material is not to seek. And we should like to have had from the companions of his last hours some record of how he fronted death, calmly and placidly, having done his work. This perhaps was not the place for the record, and yet we miss it. The words not spoken at the grave might have been written here and we should all have forgiven them. "He requested that no stone should be placed upon his grave: his books, he said, would be his only monument." With that note we must end. With that, and one other from Herbert Spencer: "Indeed, I cannot remember any one, known to me directly or indirectly, who has maintained an attitude so purely philosophical; and in whom the interests of truth have so greatly predominated over all personal interests".

W. Leslie MacKenzie.

Hypnotism. Its History, Practice and Theory. By J. Milne Bramwell, M.B., C.M. London: Grant Richards, 1903. 18s. net.

The author of this work is well known as one of the very few English physicians who, at the present time, apply hypnotism reguarly and successfully to the cure of disease. In this volume he presents a summary of the more important observations made by himself during the twelve years that he has actively practised hypnotism, and gives also a clear and very readable sketch of the history, facts, theories and methods of hypnotism. The historical chapter mainly consists of sketches of the careers and opinions of the three British pioneers of hypnotism: of Elliotson, the enthusiastic advocate of the later mesmerism, editor of the *Zooist* and physician to University College Hospital; of Esdaile, who in the hospitals of Calcutta was the first, and perhaps the last, to employ hypnotism on a great scale for the production of surgical anæsthesia; of Braid, who sifted the pseudo-science of mesmerism, separated the chaff from the grain, and gave us hypnotism very nearly in the form in which we now have it. The unfortunate attitude of active hostility, maintained by the leaders of medical orthodoxy towards these pioneers of an important new method of medical treatment, is forcibly displayed, and it must be admitted that the history as here presented does little credit to the medical profession. Then comes a brief account of the continental revival of hypnotic practice by Liebault and Bernheim and of the rediscovery, by them and their disciples of the Nancy school, of many of the facts and principles first brought to light by Braid. The following chapter describes the methods of inducing, of managing and of terminating the hypnotic state, practised by the most experienced workers, and deals with the question of susceptibility. Two facts of great and general interest are clearly established, firstly, that a tactful and experienced operator may expect to produce some degree of hypnosis in from eighty to ninety per cent. of all subjects not suffering from serious mental derangement; secondly, that, according to a consensus of opinion fully borne out by the author's own experience, persons of healthy and strong mental constitution are more readily hypnotised than those who are hysterical in any degree or otherwise mentally deficient.

There follows a long chapter devoted to a review of the experimental phenomena of hypnosis. The impression left by this review is that most of the phenomena recorded need further confirmation by experiments conducted under more rigid conditions. Especially is this the case with the experiments that are held to prove exaltation of the powers of sensory discrimination, of perception and of memory. Here we need experiments conducted with all the refinements of method that the psycho-physicists have so laboriously devised. Too often the observer has been content to assert that the performances of the subject in the hypnotic state

far surpass what is possible for him in the normal state, without having accurately determined what are the normal limits of his powers. Few persons, who have not themselves made careful tests of the sensory powers of normal individuals, realise how extremely acute the senses are, and the present writer is the more inclined to be sceptical about the reported cases of hyperæsthesia, because, in the few cases in which he has carefully compared the sensory thresholds of an individual in the normal state with those of the same individual in hypnosis, the results have been negative or have shown but a very slight lowering of threshold in the latter state.

Among the most interesting and carefully made experiments are those of Dr. Bramwell on the post-hypnotic measurement of time, here fully reported and discussed. The results of these experiments are among the most remarkable of all the many astonishing and puzzling achievements of hypnotised persons. Dr. Bramwell's most striking results were all obtained by the aid of a Miss D.; a cured patient, healthy and in every way normal at the time. The experiments were all of the following type: while in a state of hypnotically induced somnambulism "Miss D. was told that, at the expiration of a certain number of minutes, she was to make a cross and write down the hour [the minute] she believed it to be without consulting the clock, an interval of waking life always intervening between the suggestion and its fulfilment". Fifty-five separate experiments of this kind were made, and of these "forty-five were completely successful, *i.e.*, not only did Miss D. write down the correct terminal time, but this was done, also, at the moment the experiment fell due". In eight of the remaining ten cases there was a discrepancy of from one to five minutes between the time written down and the true time. The number of minutes named was generally several thousand, in many cases it was more than ten thousand, and in some cases it was more than twenty thousand, equivalent to more than two weeks. Besides the extreme accuracy with which the subject hit off the right moment, the especially striking points are the following: the subject was usually unable to state during the interval, when questioned either in the normal or the hypnotic state, the number of minutes mentioned or the time at which the period would terminate, was not aware of having made any calculation unless specially asked to do so (and then usually calculated the terminal minute of the period wrongly), but, nevertheless, felt and obeyed the impulse to make the cross and write down the correct time exactly at the moment commanded; and lastly, and most important of all, "In some instances . . . Miss D. was in a darkened room for several hours before the suggestion was executed, and absolutely without any of the ordinary methods of determining the time". Dr. Bramwell reviews the hypotheses suggested by various authors in explanation of cases similar to these and rightly concludes that no one of them will account for his facts. Gurney made similar experiments

of a much simpler nature, mentioning a given number of days or hours, and he obtained evidence which seemed to show that a secondary consciousness reckoned the term of the period, kept watch on the clock and brought about the execution of the act commanded when the right moment arrived. But Dr. Bramwell rightly points out that, even if we assume yet a third or tertiary consciousness, having better memory and arithmetical powers than the hypnotic or secondary consciousness (for the latter seemed incapable of remembering the number of minutes named and of calculating correctly the term of the period), the hypothesis is still inadequate to the explanation of Miss D.'s achievements. For, assuming that such a tertiary consciousness reckoned the term correctly, kept watch upon the clock and was cognisant of the time of day at the moment at which Miss D. entered the darkened room, still there remains entirely unexplained the fact that Miss D. wrote down the correct time at the moment commanded after the lapse of several hours in the darkened room, during which period she was entirely without objective aids to the measurement of time. The process remains as mysterious as the reported cases of telepathy and clairvoyance in hypnosis to which Dr. Bramwell unhesitatingly refuses credence. Vague references to hypothetical physiological rhythms help us no jot here, they merely serve to obscure the issue. We know of no physiological rhythm that in any degree approximates in regularity and constancy to the rhythm of a well-made clock, but only such a rhythm could serve the purpose of the hypothesis. Dr. Bramwell leaves the subject with the frank declaration that he has no theory. If we are to accept the facts as stated, and the evidence seems very strong and clear, it must be admitted that the hypothesis of telepathic communication of the time is the least startling and mysterious one that can be regarded as affording an explanation. These achievements of Miss D. are similar in kind, though far more striking in degree than that, reported of themselves by so many persons, of waking at any appointed moment after a night's sleep. It is much to be desired that those, who believe themselves to have this power, should keep a systematic, accurate and fully attested record of both successes and *failures* in a series of experiments of some length. In the very few cases in which, so far as the present writer is aware, such a record has been made, the proportion of successes was very much smaller than the statements of the subjects would have led us to expect.

In two chapters on hypnotic treatment of disease Dr. Bramwell reviews the many types of cases that have been successfully treated and illustrates them for the most part from his own practice. He concludes this section with some admirable maxims which are summed up in the one weighty sentence: "The central factor in all hypnotic treatment ought to be the development of the patient's control of his own organism". A fact of great theoretical interest is that Dr. Bramwell obtains in many cases marked therapeutic

effects by simple suggestions repeated to patients who sit with closed eyes in a drowsy state, but in whom no symptoms of hypnosis are discoverable. So good are the results thus obtained that he relies in an increasing degree upon this method, deeming it unnecessary to induce a distinctly hypnotic state.

In a long chapter of 150 pages the author briefly states and criticises the attempts to explain the phenomena of hypnotism made by a number of the best-known writers, and incidentally vindicates the correctness of the later views of Braid in those respects in which they are at variance with the views of the Nancy school. The fallacies of the Salpêtrière school and of Heidenhain are briefly dismissed. A serious defect of this chapter is the omission of all mention of the theory of Vogt and Forel which to the present writer seems by far the most helpful and promising of all hitherto propounded.

Dr. Bramwell does not put forward any theory of his own and does not fully accept any other, but he inclines to what he calls "The secondary or subliminal consciousness theory". It is much to be regretted that throughout the course of the discussion under this heading Dr. Bramwell confuses together at least two very different hypotheses, and by so doing countenances a loose mode of speech and thought that is very common, especially among those who write and speak on "psychical research". In view of the far-reaching and grandiose nature of Myers' doctrine of the "Subliminal Self or Consciousness," and in view of the widespread interest that it has excited, it is highly desirable that the term "subliminal consciousness" should be used exclusively to denote the very obscure and difficult conception that Myers sought so elaborately to justify in *Human Personality*, while the term "secondary consciousness" should be used when we wish to denote a stream of mental process of the same order as that of our normal conscious life, but separated from, and more or less independent of it. While the former is but a very vague and ill-based speculation, the acceptance of which would necessitate a complete revolution of the *Weltansicht* of philosophers and men of science alike, the latter is a conception which, though sufficiently startling and difficult to entertain, is much less revolutionary in character, and one too that seems to be forced upon our acceptance by an abundance of well-attested evidence. It may be hoped that in a new edition Dr. Bramwell will see his way to mark this important distinction and to do something towards disentangling the confusion of ideas that at present obtains so widely. In conclusion it may be said that the book is especially well suited to introduce medical men to the study and practice of hypnotism, and to prove to them that in it we have an aid to the treatment of di-ease that is of great power and value in many cases and devoid of danger in all, when practised on the sound lines laid down by the author; and it must be added that it contains much matter of the deepest interest to every student of the mind.

W. McDougall.

IX.—NEW BOOKS.

A Philosophical Introduction to Ethics. An Advocacy of the Spiritual Principle in Ethics from the point of view of Personal Idealism. By W. E. Boyce Gibson, M.A. London: Swan Sonnenschein, 1904. Pp. viii, 223.

The scope of Mr. Gibson's book is indicated by the sub-title. His purpose is, on the one hand, "to justify the existence of a Moral Philosophy," *i.e.*, of a philosophical interpretation of moral experience which goes beyond the limitations of scientific method, and, on the other, to show that this philosophical interpretation must be undertaken from the standpoint of an Idealism, which is not Absolute or theocentric, but Personal or anthropocentric. Naturally such a programme opens up all sorts of philosophical problems of the most far-reaching character, and the fact that the author tries to cover a great deal of ground in a very small book makes the book rather difficult to report upon. The difficulty is increased when one happens to disagree with a good deal of his argument.

The first part of Mr. Gibson's task is to show that a merely scientific treatment of Ethics fails to grasp the true inwardness of moral experience, and that it is the function of a Moral Philosophy to bring out that spiritual element in, or teleological aspect of, moral facts, which is necessarily ignored by Ethical Science on methodological grounds. He works towards this conclusion mainly by means of a criticism of the opposed view of Prof. Taylor, that ethics neither requires nor permits of a metaphysical basis. But critical reference is also made to the views of other writers, such as Mr. Shadworth Hodgson, while support is derived on the other side from some papers of Prof. Bosanquet, of which Mr. Gibson makes considerable use and by which he appears to have been a good deal influenced. Mr. Gibson's chief criticisms of Taylor seem entirely just, as where he remarks on the impossible standard which Taylor sets up for a metaphysical ethics, and on the difficulty involved in maintaining an *ultimate* ethical dualism from a merely *scientific* standpoint. But I think it was, on the whole, a mistake to select Taylor's book as the chief object of criticism here. Mr. Gibson's real foe is Naturalistic Ethics, and I question very much whether Prof. Taylor would accept all the views he is apparently made to represent. The outcome of the whole discussion is that there is, on the one hand, a Science of Ethics, which is merely inductive and excludes from its view the whole teleological aspect of moral experience, and, on the other, a Moral Philosophy, which makes this teleological aspect the central feature of its treatment. Now apart from the merely verbal objection to such a narrow use of the term science, there seem to be two substantial grounds of objection to the conclusion itself. (1) If the teleological character of moral experience is really its essential character, there seems very little use of a science of ethics to interpret, or rather misinterpret, its merely

external aspects. (2) The underlying contrast between science and philosophy generally seems to be stated in an unfortunately paradoxical way. Take, for instance, a statement like the following: "The common aim of both Science and Philosophy is to give the objective supremacy over the subjective. This requires of Science that it should put fact before system, and of Philosophy that it should put system before fact" (p. 57).

The second part of the argument centres mainly about Green's *Prolegomena*. Mr. Gibson of course agrees, though after certain reservations and criticisms, with the substance of Green's plea for the recognition of a spiritual principle as the basis of morality, but he takes exception, as a Personal Idealist, to Green's view of the eternal consciousness and its relation to the human self. In his exposition of Green's metaphysical argument Mr. Gibson, besides making minor criticisms of his own, has occasion to deal with the accepted type of criticism represented, *e.g.*, by *Hegelianism and Personality*. His own criticism, in which he discovers a fatal ambiguity in Green's use of the term Nature, as at one time including and at another excluding a spiritual element, seems to me rather captious, since Green's whole aim was to show that there is more in the conception of Nature than a naturalistic theory provides for. The remarks on the accepted type of criticism are directed to emphasise the more concrete or psychological aspect of Green's spiritual principle.

Perhaps the most interesting, and I think distinctly the most valuable, chapter or Lecture is that in which Mr. Gibson explains the relation of Concrete Personal Idealism, as he understands it, to current versions of Pragmatism or Humanism. He refuses to accept any Pragmatism which involves a surrender of fundamental idealistic positions, and holds that Pragmatism at its best is simply the completion of idealism, or its deliverance from the dangers of a too abstract Epistemology. Specially suggestive are the few pages in which he explains the practical attitude required by a true Pragmatism. "The manifesto entitled 'the will to believe' has left many with the impression that this new Philosophy of Faith and Risk is an apologia of loyalty at all costs, though it be blind and headstrong and not able to give an account of itself" (p. 178). But it is not in any blind clinging to one idea that the true spirit of Pragmatism is exhibited, but rather in the thoroughness with which an idea is submitted to the fullest test of practice. The way to arrive at decision is to act out our beliefs completely, "to make courageous experience with the whole issue," that so we may judge a belief "finally after deliberate experience of its *main* requirements" (p. 183).

Mr. Gibson has a definite idea to work out, he shows a sincere spirit of inquiry and an active interest in the latest philosophical discussion, but in spite of this his book is an unsatisfactory one. This is largely due, no doubt, to the fact already mentioned, that he tries to cover far too much ground—and I should mention, by the way, that I have not so much as named a number of the topics dealt with (*e.g.*, psychological discussions in which the names of Bradley, Stout and others figure importantly). And this mistake is aggravated by the rather eccentric way in which the book is arranged. Besides the Preface and Introduction, with which most writers content themselves, we find here each chapter or Lecture with a Preface to itself, and the very Introduction must have a special "Preface to Introduction". The result is a good deal of quite needless repetition, particularly out of place in so small a book. A misprint on p. 150, by which a "number of *absolutes*" are made to "flock together," should be corrected. And the following is a rather novel rendering of a well-known dictum: "Intuition without understanding is dumb, understanding without intuition blind" (p. 120).

H. Barker.

Philosophy as Scientia Scientiarum and a History of Classifications of the Sciences. By ROBERT FLINT, D.D., LL.D., F.R.S.E. Edinburgh and London: William Blackwood & Sons, 1904. Pp. x, 340. Price 12s. 6d. net.

Like everything that Prof. Flint writes, this is a very learned book, and is distinguished by clear thinking and lucid expression. As the title indicates, it consists of two parts—one being occupied with the definition and characterization of Philosophy, and the other with the History of the Classifications of the Sciences. The collocation is itself suggestive, throwing us back in thought a generation or more, to the time when the classification of the sciences was a very burning question among British thinkers, influenced this way or that by Comte, and when the approach to philosophy was uniformly made through a scheme of generalized knowledge. The parts are of unequal length, the first being considerably the shorter of the two; but both are packed with information and ideas.

It is a happy thought to present philosophy once again from the side of *scientia scientiarum*, because we thus get rid of the usual vague generalities on the subject and are brought face to face with the all-comprehensive unity in its relation to the subsidiary unities of the various sciences. A twofold advantage is thereby secured—first, the wider conception (philosophy) is filled with content and so becomes to us other than a bare abstraction; and, secondly, it is made to re-act upon the sciences and to aid in the determination of their boundaries and provinces. On practical and intellectual grounds alike this is to be commended. If it is well that philosophy should keep in touch with science, it is no less well that science should keep in touch with philosophy. Even in the interests of any special science, the wider outlook of philosophy and its spirit of broad sympathy and frank toleration, is a great desideratum. For "whatever may be fancied to the contrary, the truth is that the researches and studies of the mere specialist are never very productive. Special investigations only enrich science to any considerable extent when they are directed and guided by enlarged views; they are only truly successful when not exclusively special; when on the contrary, the part or section of existence examined is looked at by a reason illumined by a worthy and ample idea; a reason which sees the part in the light of the whole and the whole as related to the part." More particularly, philosophy is of great value in guiding education. As there is a hierarchy of the sciences, based on the principle of beginning with the simple and most fundamental and proceeding thence to the more complex and derived, it is not a matter of indifference from an educational point of view whether you pay regard to the just sequence here or ignore it. On the contrary, the sequence is everything, conditioning success and progress.

So, then, philosophy is to be viewed both as theoretical and as practical; and not the least interesting of Dr. Flint's remarks has reference to the characterization of it in these two aspects. There is a strange oversight, however, that must be noted in connexion with this. The second half of the third section of Part I. is to a considerable extent a repetition of Section II.: not only the thoughts but the actual wording are the same. (Compare, *e.g.*, p. 30 with p. 58, and p. 34 with p. 60.) There is some reflection here upon the reading of proofs.

When we come to the detailed account of the various classifications from Plato downwards, we find that it is very thoroughly done, and is full of interest. Ancient and modern alike gets due appreciation. There are occasional omissions, of course (*e.g.*, Boëthius), and there are points

which one should like to see elaborated (*e.g.*, the attitude of the Stoics towards psychology); but the work does not pretend to be absolutely exhaustive—what work of the kind could be absolutely exhaustive? Much attention is paid, and rightly so, to the leading classifications of the sciences of the second half of last century—more particularly to Comte's and the two British classifications to which it gave rise, Spencer's and Bain's. Here Dr. Flint's powers of exposition and criticism are seen at their best. His final judgment on these three last is :—"Leaving out of account Dr. Bain's unsatisfactory conception as to what should be called 'Practical Sciences,' his classification of the sciences properly so called may well be regarded as an improvement on Comte's and much superior to Spencer's".

WILLIAM L. DAVIDSON.

Educational Psychology. By E. L. THORNDIKE. Adjunct Professor of Genetic Psychology in Teachers College, Columbia University. New York: Lemcke & Buechner, 1903. Pp 177.

No one with any equipment in philosophy as well as in education, who has at any time, either through necessity or desire, read largely among books of pedagogy, can have concluded his perusal without feelings in which painful perplexity plays a dominant part. There is as little agreement among them as in metaphysical treatises, and even the saving grace of cogent and subtle reasoning, present in the latter, is lacking in the former. Nor is the reader helped to argue for the side his sympathies select by any list of cases or statistical references such as enliven the competing claims of rival theorists in natural science. Is this inevitable? Doubtless it is, so long as educational writers persist in indiscriminately mingling their ideals and their facts. In any case, ideals of life, and hence of education, will not assume uniformity because of convenience to the educationist, even though education be now a separate science. But there is hope that, at least in a limited field, agreement may be possible if we temporarily, for working purposes, (1) separate the ideal from the actual and (2) apply the methods of induction as well as those of deduction to the problems of educational investigation.

As Prof. Thorndike implies, it does not follow that we have not strong opinions about educational principles because we know little about them. The same, by the way, is true of philosophy—a proposition which, however, is not advanced, though it is illustrated, in this book. It is just this unhesitating confidence of the ignorant dogmatist that this book, sometimes by affirmations of negation equally dogmatic, so usefully attacks.

Not for a moment do I, nor do I think would Prof. Thorndike, assert that much good work has not been written on education,—even the violence of the contradictions prevents one-sidedness in patient students. But the trouble is that the work is unconvincing and individual. The fluid concepts in education must be crystallised into definite units with which the experimenter and the logician may work.

Prof. Thorndike's book is a pioneer contribution to this most pressing need, and has great value rather from its purpose than from its positive results,—which indeed is inevitable at this stage. I hope that every one who lectures on Education will read it, and that every educational administrator competent to understand it will do so likewise, for impressionism has hitherto been almost unchecked in educational work, and this book is convincing as to the necessity for other methods.

But a work of this kind should scarcely endeavour to include within itself the whole range of educational theory. It is true that the author disclaims this intent, but he thinks that what people *ought* to be is a question for educational theory, whereas it is rather an ethical question; and a summary of the work of education is hardly in place; and words like 'healthy' and 'desirable' leave things pretty much where they were.

He is guilty of an unexpected *à priorism* in being quite sure of his method, though, as he says, his results may be wrong. This is an example of what he would call the methods of philosophy, which, by the way, he deprecates.

No good purpose is served by antagonism between speculation with knowledge (or philosophy) and experimental research, and I am sorry that Prof. Thorndike should widen the breach.

He rightly attaches no more than a suggestive value to Pestalozzi and Froebel, but he identifies them, quite mistakenly, as philosophers.

He does not appear to realise the grave difficulties surrounding the question of use-inheritance. "If," says he, "people with eye defects have no visual images when their ancestors have had them for hundreds of generations, could we expect any acquired traits to be transmitted?" But ought we to expect more than the inheritance of a potentiality which might become actual in the usual way, *viz.*, through repeated visual perceptions? And these, in the terms of the case, are not possible. Moreover, one cannot cause acquirement in an individual of any trait for which he has not some natural aptitude. And there is some uncritical use of Darwinistic natural selection; *e.g.*, Prof. Thorndike maintains that facility in language has grown because those who are poor linguistically have died out. Can we seriously maintain such a proposition as this? It would at least require, on Prof. Thorndike's own principles, an elaborate array of inductive arguments.

Nor is it the abstract psychological thinker, at least in England, who has confounded different mental functions as identical (p. 28). The teacher fed on text-books does, and the experimenter and statistician often does; *e.g.*, on page 98 we have a table "Sensitiveness to Colour Differences," which really means differences of different reds; another table, "Force of Suggestion," which is really a table of the size and weight illusion. Another table is headed "Voluntary Motor Ability"; it probably means tapping. This is 'faculty' psychology indeed; these large titles may give a satisfying sense of wide outlook. but a good analytic psychologist would not indulge in them.

Chapter viii., on the influence of special forms of training upon more general abilities, contains much that is of high value. Such a study trains *the* observation, another *the* imagination, is repeated *ad nauseam*, not only by young students, but by persons whose position should imply knowledge. A careful perusal of this chapter will, one would hope, put an end to mere verbalism of this sort.

It must never be forgotten that the relation may be inverse, *i.e.*, improvement in one direction may cause deterioration in another, and, above all, that the correlation may be none, or so slight as to be of little practical consequence. But Prof. Thorndike need not introduce such dubious support for his views as that implied by a very atomistic form of psycho-physical parallelism. Two functions are correlated, he thinks, only in so far as they have identical elements as factors. He admits the difficulty of telling which "features of two mental abilities are thus identical". But, as he continues, an approximate decision may often be reached without much trouble. But, granting this, how do we know

that the common function always involves the "same cell action" in the brain? And is it probable even then, allowing the general hypothesis that the identical elements given (p. 81), "associations including ideas about aims and ideas of method and general principles" are such as are invariably or even usually accompanied by the "same cell action," by which he means, action of the same cells.

But of the practical importance of the kind of work dealt with in this chapter it is impossible to speak too highly. To take only one instance in which we might apply it. Manual Training is now taught throughout this country on the assumption that the exercises prescribed do not teach a particular trade, but favourably influence all kinds of manual sensibilities and dexterities. But not a single case is on record in which an attempt has been made by any competent person to verify the assumption.

Only lack of space prevents a fuller treatment of this book, but some of Mr. Thorndike's trenchant sayings deserve record. "Out of a thousand six-year-olds there are a score whose higher education is of more value to the community than that of a hundred of their fellows."

In reference to questionnaires he says, "The ignorance of a thousand people is no better than that of one".

The doings of the "forward" child "all witness to subnormal mental ability disguised by lack of inhibition".

The "improvement" of society "depends upon the elimination of the worse, not on their reformation".

In his chapter on the relation between mental and physical traits he sums up definitely against the prevailing notion that improved muscular efficiency, of itself, implies increased mental power, and speaking generally, Prof. Thorndike, within a limited space, probes more educational superstitions than any writer I am acquainted with; superstitions, too, which have the advantages of current acceptation and often occupy the intrenched positions of authoritative exposition.

W. H. Winch.

"*General Intelligence*" *Objectively Determined and Measured.* By C. Spearman. Reprint from the *American Journal of Psychology*, vol. xv., No. 2, April, 1904, pp. 201-292.

Mr. Spearman's pamphlet is comprehensive in design and bold in execution. He complains that, hitherto, experimental psychology has been of little service, even in studies such as education, where it should, presumably, be of much value. It is difficult from the educational standpoint not to allow that there is much truth in the assertion. It is suggested that it owes its ineffectiveness to the want of a mathematical methodology; but it is more probable that the failure is due to a want of knowledge by the experimenters of school-conditions, and an inadequate grip of what the actual problems really are, coupled sometimes with an imperfectly worked out psychological analysis.

Mr. Spearman reviews much of the work already done in mental tests, and has no difficulty in showing sharp and frequent contradictions. He charges "the entire antecedent literature" with "four grave faults," (i.) that the experimentally gained figures have been too selectively treated, (ii.) that the actual results of individual experiments have not been given in full, (iii.) that errors of observation have not been eliminated, (iv.) that a thorough preliminary investigation of all the terms concerned has not been made. These are serious and sweeping charges; but, with the exception of (ii.), it is doubtful whether they are not counsels of perfection,

and (iv.) seems to me to emphasise the analytic aspect which, elsewhere, the author appears to underrate. Still, there is much acute criticism in the remaining sections of this chapter as applied to the reasons for failure in some foregoing experiments.

The positive part of the pamphlet consists in five series of experiments which, it is claimed, show that 'sensory discrimination' and 'general intelligence' are closely correlated in a positive way. The sensory discriminations dealt with are those of Pitch, Light and Weight; and 'General Intelligence' is estimated by position in class, or by an estimate of teachers and others.

Completely carried out, such a scheme would have considerable value. But, of five series of experiments, the last does not seem to apply, as it contains no independent intelligence values. In the fourth series there is much valuable data for estimating general intelligence, but it is compared experimentally with 'pitch discrimination' only. The third experimental series should, in view of the author's own statements as to its conditions, be omitted. In the second series there is no evidence of general sensory discrimination, nor is there in the fourth series (p. 90). Table 1, however, seems complete. It would be better, perhaps, to arrange the discriminative thresholds and the intellect values in the same way, that is, both by numerical estimate or both by position in a series. It would, moreover, be valuable, in connexion with the table, to show exactly how the formulæ are applied in the case of these particular results. It does not seem unreasonable to ask that any view which is strongly opposed to the great bulk of work already done should be exempt from the least vagueness and should be demonstrated closely and cogently.

Mr. Spearman's experimental results, as here presented, do not seem to me to be wide enough to support his final conclusion, which is that 'general sensory discrimination' and 'general intelligence' show a correspondence which is not appreciably less than absolute. We seem to be back again to the 'pure ego,' which is equally able to perceive and synthesise everything, provided that it gives attention to it. In conclusion I should like to say that I have read this pamphlet several times with interest, and that it is to be specially commended to all those who are interested in the application of mathematical formulæ to the results of psychological experiment.

W. H. Winch.

The Religion of the Universe. By J. Allanson Picton, M.A. London: Macmillan & Co., 1904.

As if to qualify in earnest as a school of religious thought Agnosticism has developed both a right and a left wing. The place of Herbert Spencer, it is not superfluous to show, is not on the left, but with the right wing, which has religious affirmations to offer as well as religious negations. Mr. Picton makes this abundantly clear in his chapter on Spencer's doctrine of the Unknowable, and heartily accepts him at his own estimate as 'the first true reconciler of religion and science'. He also submits that the substance of Spencer's religious teaching is more positive than its nomenclature, and that it can be legitimately exhibited as a pantheistic type of creed. The power which is 'behind humanity and behind all other things,' he points out, would have been more fitly described as the Eternal; and the Spencerian Eternal, when thoughtfully construed, is not readily distinguishable from the God of Spinoza.

As a consequence of his elevation of Agnosticism into Pantheism, Mr.

Picton is able to write a long chapter on 'what may be known of God'. His fundamental position is that 'God is all in all and identical with the Universe,' or to speak more exactly, identical with 'the unity of substance and of energy in which and by which all things are what they are' (p. 152). From this standpoint it is clear that many things can be affirmed about God, not indeed about what He is in Himself, but about what He is to us. We can affirm that God is 'the ground and substance of our being, the co-ordination of all finite variable good, the only begetter of the sympathies and aspirations in us which make for the harmony and happiness of our world' (p. 145). The identification of God with the Universe prepares us for the denial of divine personality, but the strength of the argument at this point is less conspicuous than the violence of the language.

The main question raised by Mr. Picton's book is whether the Universe can suffice as the object of religion. The book itself may be cited as evidence. It is pervaded by a spirit of profound religious reverence, and even in respect of unction its eloquent pages will easily bear comparison with modern evangelical preaching. And it is clear that at the present time there are many in whom religion only survives as a sense of awe engendered by their knowledge of the immensity and the marvels of the Universe, and their recognition of an inscrutable power behind the things that are seen. But one thing is wanting in the religion of the Universe which appears to have been an essential and constant element in the religions which it would seek to displace. Since Schleiermacher it has been common to regard pious feeling as the vital aspect of religion, but a more careful analysis has shown that what is no less distinctive is that a religion addresses itself to a practical purpose. Every religion has undertaken to do something, and something so great that it may be defined as the means of enabling the worshipper to attain his chief end. The end might be as low as the ambitions of the savage, or as high as the sanctification of the soul; but no religion from the lowest to the highest has failed to recognise that the task set it was to come to the help of man. And the question is, if the Universe, besides exciting the semi-religious sentiment of 'cosmic emotion,' can persuade mankind that it is in its power to help in their deepest needs. Mr. Picton, no doubt, sees that there is something legitimate in this demand, and he promises so far to meet it. He would still have congregations to worship in cathedral and church, and he thinks more highly of prayer than to ascribe to it merely subjective efficacy. 'When we pray for help we are reacting to the influences playing on us from all that is, and if in such things the experience of humanity may be trusted at all, this very reaction has often quickened communion with infinite power, and men have been strengthened though they know not how' (p. 328). He would even expect conversions involving a death to self and a resurrection to a more glorious life through inspirations of the Unknowable which would thus make itself known to us as the Holy Ghost. But is there any reason to think that mankind at large would be able to share this confidence in a God who was understood neither to know nor to love? Mr. Picton confesses that it is 'the man in the street who after all most needs salvation,' and the religion of the Universe, however it may appeal to poets and philosophers, will impress his practical mind as a very problematical salvation when it dispenses with the mind and purpose of a saviour.

W. P. Paterson.

Ideals of Science and Faith. Essays by various authors, edited by the Rev. J. E. Hand. London: George Allen, 1904. Pp. xix, 333.

This volume consists of a number of essays brought together with the design presumably of illustrating the respective attitudes of broad-minded scientific and religious thinkers towards each other's problems at the present time. The representatives of science are Sir Oliver Lodge (whose article in the *Hibbert Journal* is here reprinted), Profs. J. A. Thomson, Geddes and Muirhead, Mr. Victor Branford and Mr. Bertrand Russell. The representatives of religion are the Revs. John Kelman, Ronald Bayne, Philip N. Waggett and Mr. Wilfrid Ward.

Of the book as a whole it is impossible to speak favourably. There has been little or no attempt to secure consistency in the general method of treatment. Some of the writers seem hardly to know what is expected from them, others seem to take the opportunity to discourse on their favourite themes. There is thus a good deal in the book that has very little bearing upon the main subject, *e.g.*, the essay in which Prof. Geddes expounds his views on education, and practically all the essays on the religious side except that of Mr. Wilfrid Ward. In the case of the religious essayists, however, it is perhaps a sufficient apology to mention the subjects on which they were apparently asked to write: the *Presbyterian* view, or the *Church of England* view, of the relations of religion and science. There is more meaning, of course, in speaking of a specifically Catholic view of the relations of religion and science, and Mr. Wilfrid Ward's short essay, one of the best in the book, is a very able statement and defence of the attitude of the Roman Church towards a progressive secular science. The various scientific essays are of various merit. Prof. Muirhead's "Psychological Approach" (all the essays are "Approaches") is a business-like statement of the limits of mechanical explanation. But the scientific expositions of Prof. Geddes and Mr. Branford suffer from defects which the following two quotations may respectively serve to indicate: "If the individual is the product of his ancestry, a transient whirlpool in the stream of life, a mosaic of hereditary contributions from many forebears, a chip of the old block, a detachable pendant on the eternal bead-string of germ-cells," etc. "The psychic products and processes of human evolution (Language and Literature, Science and the Fine Arts, Industrial aptitude and Religious capacity) have, in their earlier phases at least, been developed mainly by art and transmitted mainly by ceremonial. Art and ceremonial may, from a certain standpoint, be regarded as sociological structures, corresponding to what psychologically is the function of educability; and educability itself is, as Prof. Ray Lankester has well shown, the psychological correlate of what biologically is a surplusage of cerebral development beyond the needs of a material struggle for life." Why Mr. Russell's paper, here reprinted under the title of "An Ethical Approach," has been included in the volume one is at a loss to conjecture. His tones are in singular contrast with those that prevail in the rest of the book. "Brief and powerless is man's life; on him and all his race the slow sure doom falls pitiless and dark. Blind to good and evil, reckless of destruction, omnipotent matter rolls on its relentless way."

H. Barker.

Scientific Fact and Metaphysical Reality. By Robert Brandon Arnold. Macmillan & Co., 1904. Pp. xi, 360.

The main object of this work is said to be "the furtherance of efforts to bring the developments of science into touch with the point of view of

metaphysics". (When will writers on philosophical subjects cease abusing that well-intentioned but somewhat intractable metaphor 'the point of view'? Their style would gain in clearness and elegance if they would employ it more sparingly and more correctly.)

The book is an ambitious attempt to construct a complete theory of the universe by one who is equally familiar with the most recent writings on Natural Science, Psychology and pure Philosophy. Unfortunately neither wide reading nor a taste for speculation dealing with ultimate problems can ensure metaphysical acumen. The volume before us can hardly be said to be distinguished either for the cogency of its argumentation or the value of its conclusions. 'Totalisation' is the technical term with which Mr. Arnold proposes to unlock all closed doors. 'Mind' . . . 'is the totalisation of its own material body.' But mind can be 'active,' as in the animals, without being 'actual,' as it is in man, in whom alone we find introspection. But mind as known in introspection is described only in metaphorical terms as the 'flash of consciousness' in which the neural processes are 'totalised'. A curiosity of the present work is a theory of 'material images' interposing between an object and the true 'mental' image; this reminds one strangely of the scholastic doctrine of sensible forms. A discussion on Human Immortality concludes a volume which is certainly quite up to date, for it contains a reference to the Prime Minister's recent address at Cambridge and the presence of the Russian volunteer cruisers in the Red Sea!

G. R. T. Ross.

Le Néo-Criticisme de Charles Renouvier. Théorie de la Connaissance et de la Certitude. Par E. Janssens. Louvain et Paris, 1904. Pp. viii, 318.

Of all the lives devoted to philosophy that of Renouvier was one of the longest, most laborious and most heroic. At all events, it would be hard to parallel the spectacle presented by the last years of a sage of eighty-five and more publishing every year a new important volume on the problems dear to his heart, and on his very deathbed delivering to his disciple, M. Prat, his last message to mankind. It is no wonder therefore that so remarkable a personality and so voluminous a writer should have speedily fallen a victim to the commentating critic who preys upon the systems of the dead so soon as their authors are no longer alive to explain the difficulties that are suggested by their views. Not that Dr. Janssens is an unfavourable specimen of his kind; only it seems a pity that Renouvier did not fall to one capable of taking a larger and more sympathetic view of his achievement. Dr. Janssens' study is written from a Roman Catholic point of view, and has not forgotten the radical republicanism and Protestant affiliations of Renouvier. Still its biographical sketch is interesting, and the exposition of his doctrine also will be found useful, even though it is avowedly incomplete. It is restricted to his theory of knowledge and certitude, and it may be doubted, whether in so 'personalist' a thinker this really reaches to the core of the system. It is not surprising that Dr. Janssens should lay most emphasis on the features he has studied, and regard the Neo-criticism as the most essential aspect of Renouvier, but when one considers the character of his sphere of influence, it will be found to lie rather in the mighty impetus he has given to the Voluntarism and Personalism of the present day. For these reasons Dr. Janssens' criticism seems somewhat ineffective and lacking in penetration. To find, *e.g.*, as the outcome of a long discussion the conclusion that time is neither wholly subjective

nor objective, but mixed, does not seem very profound. nor will the compromise that certainty is produced 'habitually' by the intellect, but 'accidentally' also by the will, please either the intellectualists or their adversaries. This is perhaps the best that can be done from the standpoint of the Scholastic dualism which is still the official philosophy of the Catholic Church, but before it can intervene effectively in the controversies of the day it will have, like other philosophies, to grasp the fact that the aim of Voluntarism is not to assign to the 'will' the functions of the 'intellect,' but rather so to analyse the latter phrase as to bring out the volitional structure and dependence of every intellectual function. And it is Renouvier's lasting claim to the gratitude of thinkers to have been the chief pioneer of this movement, even though his somewhat too scholastic forms may require to be simplified and developed in the direction of the more empirical 'humanism' of Prof. James.

F. C. S. SCHILLER.

Immanuel Kant und seine Weltanschauung. Gedenkrede zur Feier der 100. Wiederkehr seines Todestages. Von WILHELM WINDELBAND. Heidelberg: Carl Winter, 1904.

Kant's Bedeutung für die Gegenwart. Gedenkrede zum 12 Februar 1904. Von Prof. Dr. WILHELM JERUSALEM. Wien und Leipzig: W. Braumüller, 1904.

These are two of the numerous publications to which the celebration of the centenary of Kant's death gave rise. At every German university the day was made the occasion for a *Gedächtnisstunde*, and abundant evidence was thereby furnished of the powerful influence Kant still exerts upon the thought and the thinkers of his country.

Prof. Windelband's Heidelberg address, chaste and dignified in style and diction throughout, is characterised by that soundness of judgment and comprehensiveness of view we have learnt to expect in anything that emanates from him. He draws in clear, strong outline a vivid picture of the Kantian *Weltanschauung*, not untouched by an enthusiasm for his subject which lends additional interest to the effort. The *Kernpunkt* of the Critical Philosophy he discerns in the new attitude it assumed to the old antithesis of the sensuous and the supersensuous worlds. Hardly less pointed and sharp at first than what meets us in the Platonic system, the antithesis is softened as the investigation proceeds, until at last the two worlds are seen to stand in intimate connexion, and the ultimate problem to be solved is the manner and mode of their relation. A negative and a positive trend of thought manifest themselves, according to Prof. Windelband, in Kant's speculation. The former predominates in the analysis of knowledge; scientific truth is limited to the realm of phenomena and is denied access to that of absolute reality. But this negative result leads on irresistibly to a means of advancing beyond it; for, if knowledge be confined to the phenomenal, there must needs be contained in the nature of knowledge itself the motive which has necessitated the distinction between the phenomenal and the real. The motive in question is found by Kant to be based on the fact that whilst all the conceptual work of the understanding is directed towards fixing and determining the objects of experience as elements in a completed whole, the sensuous material with which the understanding works is given to it only in space and time relations that nowhere admit of a summed-up totality. Thus in the understanding's own sphere of activity,

there emerges of necessity a consciousness of problems of an ultimate kind, but "was in ihnen aufgegeben ist, ist eben nicht gegeben," and we fall into illusion the moment we attempt to construe the demands of reason as though they were objects presented in experience. From the outstanding questions of physics, then, there springs up inevitably the impulse to metaphysics, the concepts of which are logical ideals, that set scientific cognition on its quest but elude its attempts at realisation. Yet "wo das Wissen versagt, tritt das Gewissen ein". Here, however, once more, the negative trend of Kant's thinking comes at first prominently to view. He begins his treatment of Ethics by instituting a hard and fast opposition between duty and inclination. No other sanction can the former have than that which reason itself confers, no other motive can it recognise than that of respect for a self-imposed law. And "so Kant becomes the strong opponent of all *Trinkgeldmoral*, which is pleased and willing enough to perform the virtuous deed, and then holds out its hand in the hope that some little consideration in the way of happiness may fall to its share,—although he is, at the same time, the merciless judge of that *Tugendeitelkeit*, which lauds itself for having prudently chosen the better part and for having won real bliss thereby". But in the practical, no less than in the theoretical sphere, the progress of the inquiry compels him to abandon the rigid line of demarcation; after all, the field of exercise for the moral will is the world of space and time, and its actual work consists in overcoming the resistance offered there to its realisation. Such work must be essentially infinite in character, not simply because the field of exercise appears infinitely extended, for to that infinity no reality need correspond, but because the moral law would cease to have significance were it completely fulfilled. The ideals of life, just as the ideals of knowledge, are accordingly for Kant demands, efforts, that serve as finger-posts to indicate the value attaching to empirical reality and the goal towards which it may be made to tend. Hence the final problem of the Kantian philosophy,—this namely, whether the phenomenal world can be or perhaps must be regarded in such a way that the gradual embodiment of a supersensuous plan or purpose constitutes its essential meaning or *raison d'être*. By answering this question in the affirmative in what Prof. Windelband considers the greatest of his books, the *Critique of Judgment*, Kant spans at last the gulf between the two worlds previously kept apart, and, through the notion of the adaptation of the realm of empirical fact to the ends of reason, secures a vantage ground from which to survey the entire universe of being as one intelligible system interpretable on the lines of an ethical teleology. The Kantian *Weltanschauung* culminates in the conception of human history as the gradual "Verwirklichung der Zwecke der übersinnlichen in der Sinnenwelt selbst". It is true that Kant retains to the end a certain relative dualism. In contrast with Herder, to whom the shaping of the mechanism of nature into a realm of morality and civilisation seemed due to an immanent necessity of physical life as such, he attributed this result to acts of freedom on the part of rational beings, who find themselves, it is true, in the midst of an environment which is more or less antagonistic to their aims, but which on that very account displays all the more its adaptability for calling out the energy of moral wills. "It is well so, for only thus could there really be anything in the world for us to do."

Prof. Jerusalem, in his address at Vienna, pursues a different line of reflexion. He begins by quoting a noteworthy utterance of Kant's, preserved in the *Tagebücher* of Varnhagen von Ense, "I and my writings have come a century too soon. A hundred years hence I shall be really

understood, and then my books will be studied afresh and receive recognition." The first statement Prof. Jerusalem regards as erroneous; in how far the second is true he devotes his address to deciding. The main achievement of the Kantian Epistemology he takes to be the discovery of Self-consciousness as the ground of objectivity in knowledge, and of the function of judgment as fundamentally involved in all apprehension. The table of categories, however, is a remnant of the scholasticism of Wolff, and the doctrine of the *a priori* character of space and time can no longer be defended in view of the account modern physiology has to give of the development of the sense-organs, although in what way the results of physiology bear upon the Kantian theory is not apparent. Kant, so Prof. Jerusalem urges, has bequeathed to us the task of analysing more exactly the activity of knowing, and, through examination of what takes place in the actual living process of judging, of ascertaining the form which is the common characteristic of knowledge. Merely formal Logic, however, cannot help us here. Only when it has been shown, on the basis of psychology and from the standpoint of Evolution, how our knowing faculty has been set in motion by purely practical motives, and been developed gradually to a purely theoretical function, shall we be in a position to determine the form and limits of human knowledge in general. Further, Kant's Epistemology stopped short at providing a basis for the natural sciences. But the historical sciences are equally in need of epistemological criticism. What Kant called the synthetic unity of Self-consciousness must here come into requisition in a way other than that brought to light in the analysis of objects of sense-perception. Such a criticism cannot be undertaken without a better acquaintance with the psychological character of the process of understanding verbal utterances and of apprehending human occurrences than we possess. We are still far too dogmatic in reference to our capacity of reconstructing past periods of history and of grasping the meaning of mental products other than our own. It may be that the psychology of the next few years, by disturbing this confidence of ours, and awakening us from our dogmatic slumber, will create a species of historical scepticism. In that case, at all events, we shall feel the need of a critical foundation for the mental sciences similar to that which Kant has left us for the natural sciences. Here, then, according to Prof. Jerusalem, is a promising field for carrying on Kant's work in Kant's own spirit.

G. Dawes Hicks.

Principien der Metaphysik. Von Branislav Petronievics, Dr. Phil. Erster Band, Erste Abtheilung. Allgemeine Ontologie und die formalen Kategorien. Mit einem Anhang: Elemente der neuen Geometrie. Heidelberg: Carl Winter's Universitätsbuchhandlung, 1904. Pp. xxxi, 444.

This book is not easy to understand, because its contentions are unusual and its style is involved. But the following appears to be the substance of the author's views.

The most fundamental of relations is that of diversity, and diversity itself is based upon negation.[1] Negation is either simple or derivative: the former is the relation which subsists between opposites, such as pleasure and pain or white and black. This relation also subsists be-

[1] This word is used by our author in a very peculiar sense: it seems to be analogous to the relation of contraries in the syllogistic logic.

tween space and time. The derivative sort, as *e.g.*, that which subsists between black and sweet, is obtained by a series of simple negations. (It follows, as also from other parts of the author's theory, that a quality may have more than one opposite.) Numerical diversity results from negation; but also two objects are numerically diverse only in so far as they occupy different positions in space: the nearer they are, the less numerically diverse they are. If they are in consecutive positions, they are separated by a simple negation; if not, they are separated by a derivative negation, *i.e.*, by a series of simple negations.

The author holds that *becoming* is logically impossible, and introduces the notion of absolute substance to avoid it. It is hard to make out the relation of his absolute substance (which soon retires modestly into the background) to the spatio-temporal world. He holds that instants are of two sorts: those when things exist, and those when they become. But, since becoming is unreal, the moments when things become (like the mongoose that ate the snakes) are also unreal. They are conceived merely as boundaries between times, whereas the moments of the other kind are actual constituents of time. Similarly in regard to space: there are real points, which are occupied by things, and there are imaginary points, whose only function is to keep the real points apart. Imaginary points and instants are both, I think, regarded as simple negations in the sense explained above. The number of points in space is finite, and the author hopes that the exact number may some day be calculated by the help of the theory of numbers. Similarly the number of instants in the past is finite, but not (oddly enough) the number in the future. This is because the future, being uncompleted, may be endless without involving an infinite whole. (This argument seems very questionable: it amounts only to the contention that we shall never have passed enough instants to enable the advocate of infinity to say "I told you so".) It is held that we have direct experience of instants, though not of points.

Motion, of course, is discrete like space and time, and velocity has a maximum, in which the moving particle occupies consecutive real points in consecutive real instants. The geometrical appendix works out the geometry which would result from filling a finite portion of a plane with a network of equal equilateral triangles (or squares), and regarding the angles of these triangles as real points, the remaining points of the plane being imaginary points. This geometry is regarded (with extensions to any number of dimensions not exceeding six) as the only logically possible geometry. (It is wrongly supposed that a space with a finite number of points must be Euclidean. There is a three-dimensional non-Euclidean space consisting of thirteen points.)

The rejection of infinity is made on the ground of four alleged contradictions. These are familiar, and the argument commits fallacies equally familiar. A criticism of Cantor contains what, in an undergraduate, would be called "howlers," *e.g.*, inability to see the difference between cardinal and ordinal numbers. Many objections which naturally occur to one in reading appear not to have occurred to the author, and in any case remain unanswered. In spite of these defects, however, the book deserves praise for a certain vigour, for fearlessness of consequences, for emancipation from authority, and for a very serious endeavour to understand thoroughly the topics discussed.

B. Russell.

Rudolf Euckens Welt- und Lebensanschauung. Von Dr. Otto Siebert. Langensalza: Beyer & Söhne, 1904. Pp. 72.

This is a succinct, accurate and interesting account of Prof. Eucken's philosophical system. Dr. Siebert feels himself in such entire sympathy with his author's views on every subject, except Christian dogma, that he gives us nothing by way of criticism. Instead we have a few pages in conclusion enforcing Prof. Eucken's position in regard to Religion.

D. M.

L'Imaginazione Creatrice nella Filosofia. Di Antonio Marchesini. Torino: (no date). Pp. 131.

This book was written as a thesis for the author's degree and doubtless commended itself to the examiners as sufficient for the purpose. But it can hardly claim the attention of the general public. Signor Marchesini undertakes to show that 'the objective value of philosophical doctrines is directly as the predominance of perception, and inversely as the predominance of the imagination' (p. 131). If this means that those can best discover the truth who see things most truly as they are, the statement may be accepted, but it hardly adds to our knowledge. If on the other hand it means that the best observer of phenomena makes the best philosopher, one feels strongly inclined to disagree. Aristotle was a consummate observer, but from his absolute enslavement to appearances he often went wrong where other thinkers, like the Pythagoreans and Democritus, were led to the truth by their creative imagination. The author attempts to prove his case by running through the whole history of philosophy, his knowledge of which may not always be due to first-hand study, and summarily setting down whatever does not meet his approval to a too free use of the imagination. The task of discriminating between truth and error is greatly facilitated by presenting in every instance the opinions of Prof. Ardighò as the last word on the subject. Even philosophers are human, and Ardighò may be excused for introducing his disciple's work to the public with a highly eulogistic preface. But at this rate his praise, like that of the aged Goethe, will soon be taken as a brevet of mediocrity.

A. W. Benn.

Received also:—

H. C. Donovan, *The Brain Book and how to read it*, London, Jarrold & Sons, pp. 519.

F. W. H. Myers, *Fragments of Prose and Poetry*, Longmans, Green & Co., 1904, pp. 210.

Herbert Nichols, *A Treatise on Cosmology*, vol. i. Introduction, Cambridge, Massachusetts, 1904, pp. 455.

F. C. Constable, *The Limits of Human Experience*, J. W. Arrowsmith, Bristol, 1904, pp. 64.

R. L. Bremner, *The Modern Pilgrimage from Theology to Religion*, London, Archibald Constable & Co., 1904, pp. 296.

R. K. Gaye, M.A., *The Platonic Conception of Immortality, and its Connexion with the Theory of Ideas*, London, C. J. Clay & Sons, 1904, pp. viii, 257.

Bhagavân Das, *The Science of Peace*, Theosophical Publishing Society, London and Benares, 1904, pp. ix, 443.

Annie Besant, *A Study in Consciousness*, Theosophical Publishing Society, 1904, pp. ix, 443.

Annie Besant, *Theosophy and the New Psychology*, Theosophical Publishing Society, 1904, pp. 135.

Wilhelm Wundt, *Principles of Physiological Psychology*, translated from the fifth German edition by E. B. Titchener, vol. i., London, Swan Sonnenschein & Co., 1904, pp. xvi, 347.

William H. Winch, M.A., *Notes on German Schools*, Longmans, Green & Co., 1904, pp. 264.

L. Houllevigue, *Du Laboratoire à l'Usine*, Armand Colin, pp. xii, 297.

Dr. Franz Lukas, *Psychologie der Niedersten Tiere*, Williams & Norgate, 1905, pp. 276.

Dr. Theodor Elsenhans, *Kant's Rassentheorie*, Williams & Norgate, 1904, pp. 52.

Ferdinand Horn, *Platon Studien*, Williams & Norgate, 1904, pp. x, 416.

D. A. Gille, *Philosophisches Lesebuch*, Williams & Norgate, 1904, pp. vi, 148.

Dr. Christoph Sigwart, *Logik*, dritte durchgesehene Auflage, Williams & Norgate, 1904, vol. i., pp. xxiii, 498; vol. ii., pp. xiii, 797.

X.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xiii., No. 4. **F. J. E. Woodbridge.** 'Jonathan Edwards.' [Beginning his life of constructive thought in a philosophy grounded on reason, Edwards was diverted by emotive experiences, for which he could not account, to his peculiar Calvinistic theology.] **W. B. Pillsbury.** 'The Psychological Nature of Causality.' [The anthropomorphic feeling of strain, which is an essential element of the sign of causality, will be called up by the first of two succeeding events, when they have occurred together frequently, and when all other experiences serve to confirm the assumption that they cannot exist apart.] **G. Spiller.** 'Voluntarism and Intellectualism: a Reconciliation.' [Modern voluntarism arose as a reaction against the conclusions of science. But it is, after all, only a purification of intellectualism; and as such is as much the foe of superstition and anarchy as is intellectualism itself.] Discussions. **G. M. Andrus.** 'Professor Bawden's Interpretation of the Physical and the Psychical.' **M. Prince.** 'The Identification of Mind and Matter.' Reviews of Books. Summaries of Articles. Notices of New Books. Notes. **G. N. Dolson.** 'Some Aspects of the Recent Nietzsche Literature.' Vol. xiii., No. 5. **J. A. Leighton.** 'The Infinite New and Old.' [The notion of the infinite in recent metaphysics fluctuates between two meanings: that of the potential infinite, the infinite as the law of serial order, and that of the actual infinite, the infinite as the absolute limit of human striving.] **I. Husik.** 'On the *Categories* of Aristotle.' [The *Categories* is closely related to the *Topics;* it was written earlier, and serves as a basis for the larger work.] **A. O. Lovejoy.** '*Proceedings* of the Fourth Annual Meeting of the Western Philosophical Association, held at Columbia, Mo., April 1 and 2, 1904.' Discussions. **H. H. Bawden.** 'The Physical and the Psychical.' **C. A. Strong.** 'Professor Bakewell on the *Ego*.' **C. M. Bakewell.** 'Professor Strong on the Passing Thought.' Reviews of Books. Summaries of Articles. Notices of New Books. Notes. 'The International Congress of Arts and Science.' Vol. xiii., No. 6. **J. Ward.** 'The Present Problems of General Psychology.' [Critical and historical discussion of the definition of psychology, the nature of subject activity, and the atomistic theory of mind.] **M. F. Washburn.** 'A Factor in Mental Development.' [Discrimination of present experiences and clearly conscious recall of past experiences depend upon the organism's growing power to react to stimuli not in immediate contact with the body.] **A. K. Rogers.** 'Scepticism.' [It is logically impossible to prove the necessity of a particular view of the world. But the root of assurance lies behind logical necessity, in the depths of our active and practical nature.] **T. de Laguna.** 'Ethical Subjectivism.' [This ethical standpoint, if not right, is right as against its opponents; its faults are not the transparent errors commonly alleged; it can obtain needed correction from within, by the development of its own implications.] Discussions. **G. M. Andrus.** 'Professor Bawden's Functional Theory: a Rejoinder.' Reviews of Books. Summaries of Articles. Notices of New Books. Notes.

PSYCHOLOGICAL REVIEW. Vol. xi., No. 4-5. **L. P. Boggs.** 'An Experimental Study of the Physiological Accompaniments of Feeling.' [A sphygmographic study. The results agree with those of Wundt for pleasantness-unpleasantness, agree partially for excitement-depression, and are radically different for strain-relaxation.] **T. H. Haines** and **A. E. Davies.** 'The Psychology of Æsthetic Reaction to Rectangular Forms.' [Apparatus, method, experiments; classification of motives to judgment. Explanation in terms of sensory (adaptation) and motor (eye, arm) factors, of attentional moments, of suggestion (specification of a definite use for a given figure), and association (likeness of figure shown to a class of figures).] **R. B. Perry.** 'Conceptions and Misconceptions of Consciousness.' ["The term consciousness has reference to relativity and exclusion within a world of reals, and therefore cannot signify a principle constitutive of that world itself."] **W. F. Dearborn.** 'Retinal Local Signs.' [Experiments show discrepancies between accuracy of motor impulse and delicacy of local discrimination. The former is therefore less important than has been supposed. Moreover, it is variable, and thus altogether in contrast to the relative constancy of spatial discrimination.] **K. Dunlap.** 'Studies from the California Psychological Laboratory: VI. Some Peculiarities of Fluctuating and of Inaudible Sounds.' [(1) Introspective study of physical interruptions in subliminal phases. (2) Gas-flame tones fluctuate (contrary to the results of Heinrich and Titchener).] **H. B. Alexander.** 'Some Observations on Visual Memory.' [After-image and imagination image, projected and non-projected, dream image and waking, even voluntary and spontaneous, all are united by liminal, indecisive cases. The facts of imagery suggest a primitive form of plastic intellection, intuitive rather than reflective, yet having the true marks of rational thinking, dissociation and ideal synthesis.] **C. Caverno.** 'Incipient Pseudopia.' [Record of subjective visions.] Vol. xi., No. 6. **E. B. Holt.** 'The Classification of the Psychophysic Methods.' [An attempt to rationalise the traditional methods of psychophysics under the headings of problem, procedure and method. In essentials, the author's position is akin to that of Müller's *Methodik*.] **C. T. Burnett.** 'Studies in the Influence of Abnormal Position upon the Motor Impulse.' [Experiments upon the Japanese illusion (Henri's undercrossed hands illusion) and upon mirror illusions; detailed summary of results.] Discussion. **C. L. Herrick.** 'Mind and Body: the Dynamic View.'

AMERICAN JOURNAL OF PSYCHOLOGY. Vol. xv., No. 3. **J. P. Porter.** 'A Preliminary Study of the Psychology of the English Sparrow.' [Experiments with cage fastenings, 'number' tests, form tests, colour tests, maze. The method of learning is by trial and error; attention is narrow; persistency striking; there is some proof of imitation; habits are easily modified; memory is relatively good; sense of position nice.] **L. D. Arnett.** 'The Soul: a Study of Past and Present Beliefs.'—II. [Psychological theories of the soul; analysis of questionary returns.] **R. Macdougall.** 'Facial Vision: a Supplementary Report, with Criticisms.' [The perceptual process involved may depend, in different individuals, upon several sources of sensory stimulation. Audition and the temperature sense are to be emphasised.] **F. Kuhlmann.** 'Experimental Studies in Mental Deficiency: Three Cases of Imbecility (Mongolian) and Six Cases of Feeblemindedness.' [General description of cases; experiments on memory, practice (throwing at a mark and tapping), attention and effort (tapping, association and discrimination time, attention span), discrimination (domino test). Summary of results; bibliography.] Literature. **C. Spearman.** 'The First Ger-

man Congress for Experimental Psychology.' Notes. Vol. xv., No. 4. **T. L. Smith.** 'The Psychology of Day Dreams.' [Report of questionary returns: morality of day dreaming, morbid day dreams, their relation to constructive imagination, etc.] **G. M. Whipple.** 'Reaction Times as a Test of Mental Ability.' [Denies the availability of reaction tests in determining the mental ability of school children.] **W. B. Pillsbury.** 'Studies from the Psychological Laboratory of the University of Michigan.' **C. E. Galloway.** 'The Effect of Stimuli upon the Length of Traube-Hering Waves.'—VII. [The waves are lengthened by any form of stimulus (five observers) and by muscular contraction (two observers).] **B. Killen.** 'The Effects of Closing the Eyes upon the Fluctuations of the Attention.'—VIII. [Momentary closure at regular intervals lengthens and increases the general efficiency of the waves, and decreases the time of visibility.] **G. Chiabra.** 'The Tendencies of Experimental Psychology in Italy.' [Deals chiefly with the work of De Sarlo.] **R. H. Gault.** 'A Sketch of the History of Reflex Action in the Latter Half of the Nineteenth Century.' [The Pflüger-Lotze discussion; inhibition of reflexes; summation phenomena; vascular and muscular tonus; tendon reflexes; direction of transmission, and coordination of reflexes; theories.] **G. Spiller.** 'The Problem of the Emotions.' [Analysis of emotion, in terms of organic needs, as mental attitude in a state of excitement; delimitation of emotive states.] **H. C. Stevens.** 'A Simple Complication Pendulum for Qualitative Work.' Literature. **I. H. Coriat.** 'Psychiatry.' Subject Index.

Revue de Philosophie. 1er Mai, 1904. **Comte Domet de Vorges,** 'L'abstraction Scolastique,' in reply to M. Bernies's strictures in the March number, admits that the *intellectus agens* is not revealed by consciousness; it is argued from that principle of scholastic metaphysics which everywhere distinguishes active principle and subject-matter; the subject-matter of an abstract idea being a sensation, which is a likeness of its object, and the active principle being no other than the *intellectus agens*. By *le mathematisme*, which, says **X. Moisant,** is characteristic of modern philosophy, is meant depersonalisation, as appears by these words: "To divide where one should merely distinguish, and then set side by side elements arbitrarily cut asunder, such is the method of the associationists; separating thought from the thinking subject, and considering thought as a term definite and complete in itself, they ignore its natural prolongation into a substantial ego where it has its root, and treat it as a unity, apt to be added to other unities to form a sum, which they call the ego; this enables them to boast of nowhere finding in their analysis any substantial reality; it enables them to define the ego as a collection of thoughts, emotions, volitions, desires; a succession of conscious states; a flux, or bundle, of sensations and impulses". Further, enforcing the limitations of the province of physics, **P. Duhm** maintains this thesis: "A physical theory is not an explanation; it is a system or mathematical propositions, deduced from a small number of principles, the aim of which is to represent as simply, completely, and exactly as possible, a collection of experimental laws". **P. Vignon,** 'Sur le Materialisme Scientifique,' alleges the fact of mimicry in animal development as an argument against the antiteleological mechanism of M. le Dante. In the June number, **P. Duhem's,** 'La théorie physique,' is a paper for every student of physics to consider. The aim of physical science is not to tell what things are, but how they behave: it is to register neatly and predict accurately the course of phenomena. A physical theory is an abstract and condensed representation of natural phenomena. Thus it is the business of Mechanics to describe as com-

pletely and simply as possible the movements that take place in nature. The physical student may, and continually does, do more than this; he produces a theory of the constitution of matter, or of the innermost nature of electricity; but in so doing he outruns physics and turns metaphysician. There is an interesting *compte rendu* of Dr. Dubois's *Les psychonévroses*, advocating the moral treatment of nervous diseases; also of Dr. Sollier's *Les Phénomènes d'Autoscopie, i.e.*, of corporeal visions of one's own person, whether of outward contour or of inward configuration, as of brain or skeleton; also an account of De Wulf's *Introduction à la Philosophie Neoscolastique*, which proclaims St. Thomas Aquinas the only possible rival to Kant, admitting that he needs modernising, and showing how he should be modernised. In defending his thesis for his doctorate at the Catholic Institute of Toulouse, "of the logical connexions of metaphysics with dogma," **M. Labeyrie** protests against the reduction of all philosophy to psychology.

Revue de Métaphysique et de Morale. 12e Année, No. 5. September, 1904. **L. Brunschvicg.** 'La révolution cartésienne et la notion spinoziste de la substance.' [M. Couchoud has declared that Spinoza is the direct and inevitable outcome of the pre-Cartesian philosophies. M. Brunschvicg replies by a statement of the relative position of Descartes and Spinoza, and of the influence of the former.] **G. Vailati.** 'Sur une classe remarquable de raisonnements par réduction à l'absurde.' [*Reductio ad absurdum* is a more important form of argument than is usually believed. Important use has been made of it in geometry, in the modern theory of numbers, and in formal logic.] **L. Couturat.** 'Les principes des mathématiques.—VI. La géométrie.' **G. Lechalas.** 'Une nouvelle tentative de réfutation de la géométrie générale.' [A criticism of M. Delsol's *Principes de Géométrie.*] **F. Marquet.** 'Sur l'idée de Patrie.' [An interesting continuation of the discussion on patriotism.] Livres nouveaux, etc.

Zeitschrift für Psychologie und Physiologie der Sinnesorgane. Bd. xxxiv., Heft 5-6. **L. Hirschlaff.** 'Bibliographie der psychophysiologischen Literatur des Jahres, 1902.' [3050 titles: the bibliography of the preceding year had 3624.] Bd. xxxv., Heft 1. **H. Feilchenfeld.** 'Ueber die Sehschärfe im Flimmerlicht.' [Moving objects, given simultaneously in the field of vision, are less disturbing to perception than resting objects (veil). On the other hand, they produce the unpleasant feeling of flicker.] **F. Kiesow.** 'Ueber die einfachen Reaktionszeiten der taktilen Belastungsempfindung.' [Experiments with a special apparatus: discussion of the three types of the simple reaction and of their variability.] **Beyer.** 'Beitrag zur Frage der Parosmie.' [Report of two cases.] Literaturbericht. Bd. xxxv., Heft 2. **W. Sternberg.** 'Zur Physiologie des süssen Geschmacks.' [Enumeration and analysis of sweet-tasting substances is the best method of obtaining an answer to the fundamental question as to the gustatory principle in chemical compounds.] **F. Kiesow.** 'Nochmals zur Frage nach der Fortpflanzungsgeschwindigkeit der Erregung im sensiblen Nerven des Menschen.' **W. Schoen.** 'Paradoxes Doppelsehen.' [Explanation of cases, with critique of Schlodtmann.] Literaturbericht. Bd. xxxv., Heft 3-4. **A. Borschke.** 'Ueber die Ursachen der Herabsetzung der Sehleistung durch Blendung.' [The reduction of visual acuity is due to a purely physical alteration of the image, *i.e.*, to dispersion and reflexion of light in the physical media of the eye. Critique of Heymans' doctrine of inhibition.] **O. Lipmann.** 'Die Wirkung der einzelnen Wiederholungen auf verschieden starke und verschieden alte Assozia-

tionem.' [The stronger an association, the more is it strengthened by a recurrence. And recurrence has the greatest effect upon that association which, at some previous time, was most strongly impressed.] **F. Kiesow.** 'Ueber die Tastempfindlichkeit der Körperoberfläche für punktuelle mechanische Reize: Nachtrag.' [Supplement to the paper in Wundt's *Festschrift*.] **F. Kiesow.** 'Zur Kenntnis der Nervenendigungen in den Papillen der Zungenspitze.' [Demonstration of Ruffini's papillary plexuses in *Macacus*.] **H. Beyer.** 'Nasales Schmecken.' [The sweet and bitter tastes of chloroform and ether are not sensed in the *regio olfactoria*.] **W. Nagel.** 'Einige Bemerkungen über nasales Schmecken.' Literaturbericht. Bd. xxxv., Heft 5. **J. Richter** und **H. Wamser.** 'Experimentelle Untersuchungen der beim Nachzeichnen von Strecken und Winkeln entstehenden Grössenfehler.' [Much individual variation. Hanging angles of 120° are underestimated; lines of 5 and 10 mm. overestimated.] **F. Weinmann.** 'Zur Struktur der Melodie.'—I. **E. Dürr.** 'Erster Kongress für experimentelle Psychologie in Deutschland.' Literaturbericht. Bd. xxxv., Heft 6. **F. Weinmann.** 'Zur Struktur der Melodie.'—II. [Attempts to explain the intervals of the tonal scale and the structure of melody in terms of the theory (psychologised by Lipps) that tonal relations depend upon vibration ratios.] **W. Schuppe.** 'Meine Erkenntnistheorie und das bestrittene Ich.' [Reply to Ziehen.] Namenregister. Bd. xxxvi., Heft 1-2. **Loeser.** 'Ueber den Einfluss der Dunkeladaptation auf die spezifische Farbenschwelle.' [A few seconds after dark-adaptation has begun, colour sensitivity is markedly increased. It reaches a maximum after eight to twelve minutes, and then gradually falls to a definitive level at forty to forty-five minutes. Correlation of these with Piper's results.] **E. Becher.** 'Experimentelle und kritische Beiträge zur Psychologie des Lesens bei kurzen Expositionszeiten.' [Critique of the Wundt-Zeitler theories of roving attention, and assimilative and apperceptive reading, in the light of experiments. As regards the influence of word-form and dominant letters, there is truth in both the Wundt-Zeitler and Erdmann-Dodge contentions.] **M. Levy.** 'Ueber die Helligkeitsverteilung im Spektrum für das helladaptierte Auge: zugleich ein Beitrag zur Lehre von den anomalen Trichromaten.'—I. [Coincidence of brightness maximum (in yellow-green for a "red-blind" and an anomalous trichromatic system.] **F. Kiesow.** 'Zur Frage nach den Schmeckflächen des hinteren kindlichen Mundraumes.—I. Die Uvula.' [No taste beakers are found in the uvula of children.] **H. Wolff.** 'Bemerkungen zu der Arbeit Ueber die Abhängigkeit der Pupillarreaktion von Ort und Ausdehnung der gereizten Netzhautfläche, von Dr. G. Abelsdorff und Dr. H. Feilchenfeld in Bd. xxxiv. dieser Zeitschrift.' **G. Abelsdorff** und **H. Feilchenfeld.** 'Erwiderung auf die vorstehenden Bemerkungen von Dr. H. Wolff.' Literaturbericht. Bd. xxxvi., Heft 3. **F. Schumann.** 'Beiträge zur Analyse der Gesichtswahrnehmungen.'—IV. [Illusions of direction.] **R. Simon.** 'Ueber Fixation im Dämmerungssehen.' [The deflection of the eye is due, as regards direction, to an uncertain factor (probably certain conditions in the muscular system), and as regards magnitude to the brightness of the object or the degree of adaptation.] **S. Exner.** 'Zur Kenntnis des zentralen Sehaktes.' [Discussion in the light of Hitzig's and Imamura's experiments on the dog.] Literaturbericht. Bd. xxxvi., Heft 4. **J. Fröbes.** 'Ein Beitrag über die sogenannten Vergleichungen übermerklicher Empfindungsunterschiede.'—I. [Experiments with lifted weights, by the method laid down in Müller's *Methodik*. The paper contains valuable introspective material.] **G. A. Hoefer.** 'Untersuchungen über die akustische Unterschiedsempfindlichkeit und die Gültigkeit des Weber-Fechnerschen Gesetzes bei normalen Zuständen, Psychosen und funktionellen Neurosen.' [Experi-

ments by the method of r. and w. cases; Weber's Law holds approximately over a wide range of intensities. The pathological experiments are preliminary only, but give promising results.] **Bumke.** 'Untersuchungen über den galvanischen Lichtreflex.' [In fatigue, the limen of the light reaction is lowered, that of the pupillomotor reaction raised; the normal ratio may be 1 : 2, the abnormal as high as 1 : 40.] Literaturbericht.

ARCHIVES DE PSYCHOLOGIE. Tome iii., No. 2. **J. L. des Bancels.** 'De la Mémoire.' [General discussion of the function of memory in the organic and inorganic worlds.] **A. Lemaitre.** 'Un cas d'Audition Colorée hallucinatoire, suivi d'observations sur la stabilité et l'hérédité des photismes.' **W. M. Kozlowski.** 'Le Plein et le Vide.' [Among the constituents of the world of extension, admitted by current science, two are of rational (force and ether), two of intuitional origin (matter and motion). The psychological sources of this dualism must be taken account of, and the dualism transcended by a reconstructed psychogenesis of space.] Recueil des Faits: Documents et Discussions. **M. Thury.** 'À propos d'un Rêve Significatif.' **M. Daubresse.** 'Mémoire Musicale.' **M. Daubresse.** 'Suggestion.' **E. Claparède.** 'Association Médiate dans l'Évocation Volontaire.' [Typical case of mediate association from the writer's experience; reply to Piéron.] **T. Jonckheere.** 'La première Conférence Belge pour l'Amélioration du Sort de l'Enfance Anormale.' Bibliographie. Notes diverses. Tome iii., No. 3. **M. Borst.** 'Recherches expérimentales sur l'éducabilité et la fidelité du témoignage (Psychologie der Aussage).' [Experiments with four coloured pictures; narrative and examination of witnesses. In general, about one-tenth of a voluntary deposition is erroneous; about one-twelfth of answers under oath are also erroneous. The accuracy of report may be increased by practice; women are fuller and more accurate witnesses than men; narrative is more accurate than answers under examination.] Recueil des Faits: Documents et Discussions. **E. Claparède.** 'Congrès allemand de psychologie expérimentale.' Bibliographie. Notes diverses.

ZEITSCHRIFT FÜR PHILOSOPHIE UND PHILOSOPHISCHE KRITIK. Bd. cxxiv., Heft 1. **Ludwig Busse.** 'Immanuel Kant.' [In praise of Kant as a university teacher.] **P. Beck.** 'Erkenntnisstheorie des primitiven Denkens (Schluss).' [Primitive man first realises time, both past and future, as the abode of supernatural beings, a habit of which more modern notions about eternity are a survival. In like manner general notions or concepts began by being regarded from a mystical point of view, which continued to prevail during periods of advanced speculation.] **Gregor v. Glasenapp.** 'Der Werth der Wahrheit (Schluss).' [Truth in itself has no value. The information given by Judas to Caiaphas was strictly true but ought not to have been given. On the other hand there are justifiable and even meritorious falsehoods. Truth is to be prized only in so far as it tends to unite us with the All-One, either directly, or by uniting us with one another.] **Hans Schmidkunz.** 'Neues von den Werten.' [Gives some account of a work by Kreibig in which the theory of values is placed on a psychological basis. Kreibig takes for his starting point a threefold division of interests: (1) Interest in myself, which is hygienic; (2) interest in other persons, which is ethical; and (3) interest in objects as such, which is æsthetic.] **Georg Ulrich.** 'Bewusstsein und Ichkeit.' [Expounds a theory of knowledge which seems to be based on Berkeley and J. S. Mill, although without reference to those names.] **Erich Adickes.** 'Bericht über philosophische Werke, etc.' [An account of English and American works in philosophy published in the years

1897-1900. Among others, a considerable space is given to the new edition of Roger Bacon by J. H. Bridges, B. Rand's *Shaftesbury*, B. Russell's *Leibniz*, Shadworth Hodgson's *Metaphysic of Experience*, Ladd's *Philosophy of Knowledge* and his *Theory of Reality* and Münsterberg's *Psychology and Life*.] **G. Kohfeldt.** 'Ein bisher noch ungedruckter Brief Kants.' Recensionen, etc. Bd. cxxiv., Heft 2. **Wilhelm Waetzoldt.** 'Zum Problem einer normativen Ästhetik.' [Recommends (with justice) the sculptor Hildebrand's "Problem der Norm" as a contribution to the inductive treatment of æsthetics.] **Eduard v. Hartmann.** 'Energetik, Mechanik und Leben.' [Chiefly interesting as a reply to William Stern. Hartmann is well aware that the gradual approach of energy to entropia admits of being represented by an asymptotic curve. But the approach will be quite sufficiently near to make life as we know it impossible. There is nothing peculiarly pessimistic in looking forward to this eventuality as certain. If life is on the whole a bad thing its cessation will be an unmixed gain. If it is better than nothing, that it should have ever existed, even for a limited period, is so much to the good. Anyhow entropia will only bring about by a very dilatory process what, according to Hartmann's philosophy, will be effected in a systematic and purposeful way by a readjustment of the present arrangement of things.] **M. Wentscher.** 'Zur Kritik des psychophysischen Parallelismus,' [A defence of Busse against Paulsen's vindication of the "double-aspect" theory. The chief point made is that the idea of an extended world could not be "given" to consciousness unless body acted on mind.] **Gustav Gerber.** 'Über das religiöse Gefühl.' [The religious feeling consists in a consciousness of the supreme personality of the universe acting through our personality for the accomplishment of his ends.] **Carl Töwe.** 'Die Schopenhauer-Porträts.' Recensionen, etc. Bd. cxxv., Heft 1. **R. Falckenberg.** 'Zu Kuno Fischers 80. Geburtstage.' [A page of graceful compliment to the veteran historian of philosophy.] **Franz Strunz.** 'Die Psychologie des Joh. Bapt. van Helmont in ihren Grundlagen.' [A not very successful attempt to exhibit van Helmont as an original thinker.] **Anna Tumarkin.** 'Die Idealität der ästhetischen Gefühle.' [Æsthetic emotions are as real as any others, and indeed from the nature of the case are often more intense. Being excited by imaginary situations they are not disturbed by any selfish regard for our own interests; while for the same reason the current of feeling is not weakened by being converted into a motive force for action. Very active natures are, as such, unfitted for æsthetic appreciation; and æsthetic natures, of which Hamlet is the chief type, are averse from action. An excellent article, far the best in the number.] **E. Dutoit.** 'Bericht über die Erscheinungen der französischen philosophischen Litteratur, 1900-1901.' [Gives particular attention to the works of Couturat on the Logic of Leibniz, of Charles Renouvier on the Dilemmas of Metaphysic, and of Letourneau on Ethnic Psychology.] **Hans Schmidkunz.** 'Ethik des Mitleids.' [Not so much a discussion of sympathy as a controversial criticism of Wilhelm Stern's book on the subject, where the reviewer desiderates a clearer distinction between the sciences of value (logic, ethics and æsthetics) and the sciences of fact.] **Bruno Bauch.** 'Sittlichkeit und Kultur.' [Accepting Kant's ethical theory as fundamentally true we must look for the realisation of the good to civilised society. Civilisation is not itself the ideal, but is a *sine quâ non* for its attainment.] Recensionen, etc.

Archiv f. d. gesammte Psychologie. Bd. i., Heft 2 und 3. **T. Lipps.** 'Einfühlung, innere Nachahmung, und Organempfindungen.' ["Die spezifische Eigenart des ästhetischen Genusses . . . besteht darin, dass dieser Genuss ist eines Gegenstandes, der doch, eben sofern er Gegenstand des

Genusses ist, nicht Gegenstand ist, sondern ich; oder, dass er Genuss ist des Ich, das doch, sofern es *ästhetisch* genossen wird, nicht 'ich' ist, sondern gegenst ändlich. Dies alles . . . macht den Sinn des Begriffes der 'Einfühlung' aus . . . Indem ich . . . in der gesehenen Gestalt mich tätig fühle, fühle ich mich zugleich in ihr frei, leicht, stolz. Dies ist ästhetische Nachahmung. Und diese ist zugleich ästhetische Einfühlung. . . . Dies ist eben das Besondere der ästhetischen Nachahmung, dass dabei die fremde Bewegung an die Stelle der eigenen tritt." After these general definitions the writer takes up the question of organic sensations and their relation to æsthetic enjoyment, with completely negative result. "Organempfindungen, welcher Art sie auch sein mögen, gehen in die ästhetische Betrachtung und den ästhetischen Genuss in *keiner* Weise ein."] **F. Krueger.** 'Differenztöne und Konsonanz.' [First part of an elaborate and carefully written article. The explanations of consonance by overtones; Lipps's rhythm theory, and the question of the 'unconscious' in the realm of tone; Stumpf's theory of fusion. The formulation of the question of consonance: perception and feeling; direct consciousness and judgment; the judgment of interval and consonance; tonal sequence and the compound clang. The fundamental significance of difference-tones for consonance and dissonance: historical and critical review of the literature; the difference-tones themselves and their consequences.] **A. Mayer.** 'Ueber Einzel- und Gesamtleistung des Schulkindes.' [A very thorough paper (140 pp. in length) on the relative advantages of separate work and work in class (for which latter the not very happy term *Gesamtleistung* is chosen) for school children. The subjects were fourteen boys from the fifth year's course of the Würzburg *Volksschule;* for control experiments, another fourteen were selected from the same class a year later. The subjects are characterised in detail; the range of topics covered is wide, and the results are submitted to careful evaluation, qualitative and quantitative. The general result is that work in company is better for the progress of the pupil than work by himself. The paper ends with practical suggestions.] Referate. **W. Wirth.** 'Fortschritte auf dem Gebiete der Psychophysik der Licht- und Farbenempfindung.'

Bd. i., Heft 4. **C. Pentschew.** 'Untersuchungen zur Oekonomie und Technik des Lernens.' [Discusses the results of thirty experimental series, with meaningless and meaningful material, and child and adult observers. Piecemeal learning has the disadvantages of disturbance of context, the formation of inhibitory associations, poor memorisation of transitions, forgetfulness of sections already learned with consequent unpleasant feelings, mechanisation of learning without realisation of the sense, unequal concentration of attention with consequent liability to distraction, unequal distribution of the repetitions, and finally uncertain reproduction and weak retention. The only disadvantage of learning by wholes is that the extent of the material makes a greater drain upon the attention, and thus leads more easily to mental fatigue. The author sought to control the fatigue-effects by specially devised experiments, and promises a future paper on this subject.] **E. Dürr.** 'Ueber die Frage des Abhängigkeitsverhältnisses der Logik von der Psychologie; Betrachtungen im Anschluss an die "Logischen Untersuchungen" von Edmund Husserl.' [Criticism of Husserl, Schuppe and Elsenhans. There are three relational possibilities. Logic may be the applied, psychology the pure science; logic may be the part, psychology the whole; logic may be an independent theoretical science, based however upon certain fundamental presuppositions, concepts and laws, which themselves appear as problems in psychology. The writer rejects the two first and accepts the third definition.] Referate. **A. Vierkandt.** 'Fortschritte auf dem Gebeit der Völkerpsychologie, Kultur- und Gesell-

schaftslehre: Literaturbericht über das Jahr 1902.' **H. Gutzmann.** 'Die neueren Erfahrungen über die Sprachstörungen des Kindesalters: Referat über die Jahre 1898-1902.' Besprechungen.—In reviewing the total contents of this first volume, we must emphasise the value of the collective *Referate*. It must also be acknowledged that the standard of the original articles is fully up to that of the *Studien*. These papers are, however, woefully long. If everything must be printed, it would be advisable to break up the monotony of the pages by better differentiated subheadings and by the use of various forms of type. A blacker ink would also make the reading of the *Archiv* much more pleasant than it now is.

Bd. ii., Heft 1. **F. Krueger.** 'Differenztoene und Konsonanz.'—II. [Discusses the elementary distinguishing characteristics of consonance and dissonance; the affective impression and the general effect of compound clangs; and the relation of consonance to fusion.] **A. Vierkandt.** 'Wechselwirkungen beim Ursprung von Zauberbraeuchen.' [Psychological analysis of the motives involved in certain magical ceremonies: emotive factors, suggestion, dominating habits of thought, etc.] Besprechungen.

Philosophisches Jahrbuch. Bd. xvii., Heft 1. **Dyroff.** 'Das Selbstgefühl.' [This is the first article of a series. Is what we call consciousness a feeling which is the foundation of all our knowledge? If there be no such feeling, we may also ask whether consciousness is the foundation of all knowledge. The statement 'Consciousness exists,' may mean that it is a special form of cognition, or that there is to be found in feeling an evident proof that the individual who feels exists.] **Straub.** 'Die Aseität Gottes.' [In conclusion the author shows that the fact of God's existence is that of His possibility. If God did not exist, He would not be possible. In this case, *a posse ad esse valet illatio*, because His idea is that of a necessary Being—of One that cannot *not be*. Such a notion is absurd—or if not absurd, God really exists, since what must exist exists in reality, unless 'what must exist' includes self-contradiction.] **Von Holtum.** 'Das Angenehme und das Gute.' [If pleasure is good, what is pleasurable is only good relatively, in so far as it causes pleasure: but what is absolutely good must cause pleasure. Some pleasurable things may then be evil in a sense, and cause pleasure only on account of an abnormal disposition of body or mind, proceeding from suggestion, subservience to the opinions of others, undue subjectivism, or morbid state, or custom.] **Endres.** 'Otlohs von St. Emmeram Verhältnis zu den freien Künsten.' [This is the first of two articles describing the work of an early mediæval thinker on behalf of the study of the liberal arts.] **Lauer.** 'Die Gewissenslehre Alberts des Grosses.' [A statement in two papers of Albert the Great's theory of Cognition, which in its main lines follows that of the majority of Schoolmen.]

Rivista Filosofica. Anno vi., vol. vii., Fasc. iii., May-June, 1904. **C. Cantoni.** 'L'Apriorità dello spazio nella Dottrina Critica di Kant.' [Kant is right in teaching that we know the properties of space *a priori*, if such knowledge is understood in a logical, not in a psychological sense. That is, what we first learn by gradual experience afterwards acquires a certainty which reason alone can give. He is less happy in treating space as a purely formal and subjective element of perception. One fails to see how two factors differing so radically in their origin and nature as Kant's "form" and "matter" could ever unite in a living whole.] **E. Sacchi.** 'L'Immoralismo di Nietzsche giudicato da A. Fouillée.' [Nietzsche is of no account as a philosopher, and his ideas are not original; but

he will live for ever as a writer and a poet.] **A. Piazzi.** 'Ancora sulla Libertà degli Studi nella Scuola Media.' [A polemic of merely personal interest.] **E. Juvalta.** 'La dottrina delle due Etiche di H. Spencer.—Parte III. ed ultima.' [Spencer is right in taking the conception of an ideally perfect society as the ethical standard. But his system is vitiated by three great errors: (1) defining the absolute end of conduct as pleasure; (2) identifying the constitution of the ideal society with the limit of evolution which has no limit; (3) perpetuating the injustices of an economical régime where inequalities of social position, independent of personal merit, are only maintained by force.] Rassegna Bibliografica, etc. Anno vi., vol. vii., Fasc. iv., September-October, 1904. **G. Zuccante.** 'Sul concetto del bene in Socrate a proposito del suo asserito utilitarismo.' [Xenophon's reports of the Socratic conversations are quite trustworthy, but none of them need be interpreted in the sense of utilitarianism; nor is the Protagoras of Plato really utilitarian. All such dialogues must be read in connexion with more unequivocal expressions of opinion and interpreted by them.] **A. Gropalli.** 'La funzione pratica della filosofia del diritto.' [Chiefly occupied with explaining the contradictory views held by different Italian schools of jurisprudence as to whether it should be a theoretical science only, or aim at the guidance of future legislation.] **G. Tarozzi.** 'Per lo studio della famiglia.' [The history of the family presents a progressive transference to moral control of what had before been a subject of legal control, and a continuous creation of new responsibilities and duties. The good of the family is an end in itself, and should by no means be subordinated to the good of the state.] **E. Sacchi.** 'Le religioni positive e la religione dello spirito secondo Sabatier.' [Sabatier's religion of the spirit is a beautiful but utopian conception. It would neither have done the work of the early Church nor does it meet the exigencies of modern civilisation.] Rassegna Bibliografica, etc.

XI.—NOTES.

MIND ASSOCIATION.

THE Annual General Meeting of the Association was held on 2nd June last in Balliol College, Oxford. It was resolved that the general meeting next year be in Cambridge in June. The following is the full list of the officers and members of the Association :—

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LEWIS CARROLL'S LOGICAL PARADOX (MIND, N.S., 3).

May I recur for a moment to this now ancient puzzle in order to suggest a solution not yet, I think, put forward—a solution which follows naturally from a certain view of the nature of propositions of the form *If A, then C.* The view in question is a modification of that propounded by J. S. Mill,[1] according to whom *If A then C* means *The proposition C is a legitimate inference from the proposition A.* In this I agree with Mill, accepting, however, the distinction drawn by Mr. Johnson and Dr. Keynes between Conditionals and Hypotheticals (Keynes, *Formal Logic*, part ii., ch. viii.), and supplementing Mill by the recognition that while in some propositions beginning with *If* the whole proposition is merely formal, since the Antecedent *expresses* the whole logical ground of the Consequent—*e.g.*,

If M is P and S is M, then S is P;
If all M is P, then no M is not P—

in other propositions of the same form the Antecedent expresses only part of the logical ground of the Consequent, the remaining part being understood—*e.g.*,

If M is P, S is P.

This is elliptical or 'enthymematic,' the unexpressed clause being S is M.

This is the simplest and most obvious case of those propositions of the *If A, then C* kind which are not formal or self-contained. *If A is B, C is D*, is a commoner form, but the principle is the same. I am aware that examples could be brought forward which may seem incompatible with this view, cases in which Antecedent and Consequent have no relation of inference to each other, *e.g.*, If to-day is Tuesday, the sea is salt—but all these are I believe at the best either merely rhetorical or epigrammatic, comparable to such categorical forms as A man's a man, Cards are cards, The truth is true, Some children are not children, Some justice is not just—which are of course only admissible if reducible to *S is P*, and *S is not P*—and the view includes quite naturally and simply the important class of propositions of the forms

$$\text{If A} \begin{Bmatrix} \text{were} \\ \text{had been,} \\ \text{etc.} \end{Bmatrix} \text{ B, then C} \begin{Bmatrix} \text{would be} \\ \text{would have been,} \\ \text{etc.,} \end{Bmatrix} \text{ D.}$$

which, to say the least of it, present great difficulties on the view that in *If A then C*, C is not to be regarded as an inference from (or consequent of) A.

I proceed to apply my view to Lewis Carroll's 'paradox'. The dilemma (to give his "ornamental presentment") is as follows :—

At a certain barber's there are three men who "mind the shop," of whom, of course, one (except on holidays) must always be in. These three are named respectively, Carr, Allen, and Brown. At the time when we are concerned with the shop, Allen has been ill and is still very shaky, so he never goes out without Brown. It is therefore true that if Allen is out, Brown is out. Since, however, if Carr is out and Allen is out, Brown must be in, we have

(1) If Carr is out, then if Allen is out, Brown is in;
(2) If Allen is out, Brown is out;

and 'Uncle Joe' hence undertakes to prove to 'Uncle Jim' that Carr must in any case be in.

[1] Mill's *Logic*, bk. i., ch. iv.

According to Mr. W. E. Johnson "the two disputants may agree in expressing the problem in the following form :—

Principal Antecedent : Carr is out.

Principal Consequents : If Allen is out, Brown is in ;
If Allen is out, Brown is out.

Uncle Joe uses the general method of the *reductio ad absurdum*, for he disproves the principal antecedent by maintaining that *the consequents to which it leads*[1] are incompatible. But in reality the two sub-hypotheticals which form his principal consequents are *not* incompatible. For in saying that two propositions are incompatible we mean that their combination involves a logical impossibility. Now the combination of these sub-hypotheticals does *not* involve any impossibility, but involves merely the denial that Allen *can be out*. In other words, we combine two hypotheticals, having the same antecedent with contradictory consequents, to prove the falsity of the common antecedent. Here we interpret the principle of the *reductio ad absurdum* in precisely the same way as Uncle Joe, but we apply it to the sub-hypotheticals instead of to the *principal hypotheticals*. Since, then, the two sub-hypotheticals taken separately would prove 'Allen is in,' the two principal hypotheticals of which these are the consequents prove 'If Carr is out Allen is in'" (MIND, N.S., 3, p. 583). (What would Mr. Johnson give as the *Principal hypotheticals* here ?)

I demur, however,

(*a*) to calling *Carr is out* the "Principal Antecedent," and think that the whole root of the matter is that *Carr is out* is *not* the Antecedent of (2).

(*b*) I object also to the conclusion that

If A, then C
If A, then not C

prove in all cases "the falsity of the common antecedent" A. They do this indeed if A gives the whole ground for the contradictory conclusions *C* and *not C*, but only if this is the case. Take for instance the following :—

(1) If that is your dog, your dog is a Welsh collie ;

(2) If that is your dog, your dog is not a Welsh collie.

In (1) the suppressed premiss is *That is a Welsh collie*, while in (2) it is *That is not a Welsh collie*, and clearly (1) and (2) as thus understood cannot be true together. The contradictoriness of the expressed consequents of (1) and (2) could only disprove their common antecedent, if those consequents followed from that expressed antecedent, in which case that expressed antecedent must in itself be contradictory.

Similarly, we may have symbolically :—

If S is M, S is P [because M is P] ;
If S is M, S is not P [because M is not P].

The two Hypotheticals cannot be true together—but how does the supposition of their truth tend to disprove *S is M* ?

The principal supposition (or premiss) in the whole case of Allen, Brown, and Carr (understood and argued from though not *expressed* by Lewis Carroll) might be stated thus :—

(1) If either two of the three (A, B, C) are out, the other must be in. From this taken alone it follows, that If Carr is out, if Allen is out, Brown is in.

But further knowledge of the relations of in and out between Allen and Brown gives the second premiss or supposition on which we proceed,

(2) If Allen is out, Brown is out, and (2) must be satisfied as well as (1).

[1] Italics mine.

By (1) *one* of the three men must be in,
Therefore if A is out and B is out, C is in,
Therefore if C is out, then A is in or B is in.
But by (2) If A is out, B is out:
Therefore if A is out, C is in,
Therefore if C is out, A is in.

E. E. C. Jones.

NOTE BY MR. A. F. BRADLEY.

In the last number of Mind Mr. A. Sidgwick complains that he has suffered injustice. His attitude towards the new Gospel, it seems, has been misrepresented, and he seeks to deny my statement that he claims to be the champion of philosophical scepticism. As to the first point, how far he has been misrepresented the reader may decide; but on the second point perhaps I should offer a few words. In the article to which I referred (Mind, N.S., No. 11) the reader, I think, will find that Mr. Sidgwick unquestionably takes the field as the self-elected representative of philosophical scepticism, and the doubt is merely as to the meaning to be given to this term. Certainly Mr. Sidgwick explicitly there rejects scepticism in one sense and explicitly defends it in another special sense which I have noticed elsewhere. But these special senses, and in short the ambiguous detail of the article, are, I submit, here irrelevant. The words 'philosophical scepticism' were used by me in their ordinary meaning. And the real question is whether the scepticism which Mr. Sidgwick champions does or does not imply scepticism in this general sense. Does he or does he not advocate the main sceptical conclusion that no positive doctrine in philosophy is theoretically indisputable? As to his acceptance of this conclusion the reader, I submit, is left no liberty to doubt (see more particularly p. 339). And I thought it well perhaps to remark on the apparent co-existence of this position with a benevolent interest in our new philosophical creed.

If Mr. Sidgwick's intention was not to accept the main doctrine of scepticism, as commonly understood, he has of course only to state this, if indeed he is in a position to do so. And as his attack on myself showed to my mind little comprehension of my meaning, there is no reason, I presume, why I may not on my side have failed to understand his. But as to the person who in that case is most to blame for the wrong of which Mr. Sidgwick complains, the reader must judge, if he thinks it worth while to do this. I should be sorry to have contributed to injustice, but on the other hand I could not accept responsibility for any divergence between Mr. Sidgwick's literary intentions and their execution. I should add that practically I am acquainted only with those writings of Mr. Sidgwick to which I have referred. And I must end with an apology to the readers of Mind for intruding on them with matters which perhaps have little but a personal interest.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—THE NATURALISM OF HUME (I.).

By Norman Smith.

"Hume's philosophic writings are to be read with great caution. His pages, especially those of the *Treatise*, are so full of matter, he says so many different things in so many different ways and different connexions, and with so much indifference to what he said before, that it is very hard to say positively that he taught, or did not teach, this or that particular doctrine. He applies the same principles to such a great variety of subjects that it is not surprising that many verbal, and some real inconsistencies can be found in his statements. . . . This makes it easy to find all philosophies in Hume, or, by setting up one statement against another, none at all."[1] The latter is, in effect, what Green has done in his *Introduction to Hume's Treatise*. Green's interpretation of the *Treatise* leads to the conclusion that Hume has no set of positive beliefs, and merely develops to a sceptical conclusion the principles which he inherits from Locke and Berkeley. Nothing exists but subjective mental states, organised by the brute force of association. There is no self, no external world. Hume, Green contends, is more of a subjective idealist than even Berkeley, and so thorough a sceptic that he denounces all belief in permanence, in identity, in activity, whether in the self or outside it, as fiction and illusion. All is change: change governed by no law.

This, however, is now generally recognised as being an unfair statement of Hume's position, and as ignoring all

[1] Selby-Bigge, *Introduction to Hume's Enquiries* (1894 edition), p. vii.

that is most characteristic in his teaching. In answer to Green I may quote the words of another member of the Idealist School: "It is evident that Hume was not lost in the quagmire of subjective idealism. The objective and the subjective are with him akin: the objective is the subjective, which is universal, permanent, and normal. The causal relation has, in the first instance, only a subjective necessity; but through that subjective necessity or its irresistible belief, it generates an objective world. . . . Kant's Hume is therefore a somewhat imaginary being: the product, partly of imperfect knowledge of Hume's writings, partly of prepossessions derived from a long previous training in German rationalism."[1] In these articles I shall try to determine how far, and in what sense, these statements, which Wallace merely makes by the way, and without attempting to justify them by a detailed account of Hume's position, may be regarded as true. My general conclusion will be, that the establishment of a purely naturalistic conception of human nature by the thorough subordination of reason to feeling and instinct is the determining factor in Hume's philosophy; and in order to bring out clearly the significance of this general principle I shall dwell only on the central aspects of his philosophy, omitting, for instance, his views on mathematical science, in which he was not really at home and in reference to which his teaching appears in its least fortunate light. I shall keep almost entirely to his theory of ordinary consciousness and to his theory of morals.

I may begin by considering whether Green is justified in asserting that Hume denies the existence of the external world and of the self. It is still the prevalent view that Hume agrees with Berkeley in the denial of a material world. Hume undoubtedly accepts Berkeley's arguments against the knowability of such a world; and to their number he himself adds another derived from his own philosophy.[2] Also, though he lays little stress on these

[1] Wallace, *Prolegomena to Hegel's Logic* (2nd edition), chap. viii., pp. 96-97.

[2] *Treatise*, bk. i., part iv., § ii.; Green and Grose's edition (1874), pp. 499-500; Selby-Bigge's edition (1888), p. 212. Hereafter I shall refer to Green and Grose's edition as 'G,' and to Selby-Bigge's edition as 'S-B.'. I assume—the evidence (*cf.* Selby-Bigge's *Introduction to the Enquiries*) seems fairly conclusive—that Hume's philosophy must primarily be judged by the *Treatise*. But I shall make use of the *Enquiries*, and also of the *Dialogues concerning Natural Religion*, when they seem to support or to extend the conclusions come to in the *Treatise*. Hume's philosophy as expounded in these three works seems to me to form, on the whole, a consistent system.

arguments—they are barely mentioned in the *Treatise*—the sufficient reason is that he believes himself to have demonstrated, by his deeper analysis of sense-experience and of reason, that it is impossible by either of these, the only two sources of knowledge, to establish the existence of body. But while thus strengthening Berkeley's position, he denies its relevancy. What we may perhaps describe as the chief aim of Hume's philosophy is to prove that, save as regards those relations upon which the mathematical sciences are based, belief never rests on reason or insight, and that, on the contrary, what we may call synthetic reason is itself merely generalised belief. The assumption of the existence of body is a 'natural belief' due to the ultimate instincts or propensities that constitute our human nature. It cannot be justified by reason, but this unaccountability it shares in common with our moral and æsthetic judgments and with all those theoretical beliefs which concern matters of fact. Green, in ignoring this new doctrine of belief, certainly one of the most essential, and perhaps the most characteristic doctrine in Hume's philosophy, and in regarding Hume as attempting to generate experience out of simple impressions by the mechanism of association,[1] in the manner of Mill and Spencer, misrepresents both the spirit and the letter of Hume's *Treatise*. Green by his close-knit massive argument has certainly succeeded in showing that Hume in developing the line of thought of Locke and Berkeley, reveals the incapacity of their principles to account for experience. But to that general conclusion Hume would in great part agree. His predecessors were, he believed, bound to fail in the establishment of their philosophy;[2] and this inevitable failure he

[1] "The vital nerve of his philosophy lies in his treatment of the 'association of ideas' as a sort of process of spontaneous generation, by which impressions of sensation issue in such impressions of reflexion, in the shape of habitual propensities, as will account, not indeed for there being—since there really are not—but for there seeming to be those formal conceptions which Locke, to the embarrassment of his philosophy, had treated as at once real and creations of the mind" (*Introduction to the Treatise*, pp. 162-163). In opposition to such statements we must insist that Hume does not regard association as 'explaining' or 'generating' ideas or feelings, but only as stating the conditions under which, as a matter of fact, we find them to occur. The same misinterpretation of Hume's use of association appears in Green's criticism of Hume's doctrine of the disinterested passions.

[2] *Cf. Enquiry*, § xii., part i.; G., note to p. 127; S-B., note to p. 155. "Most of the writings of that very ingenious author [Berkeley] form the best lessons of scepticism, which are to be found either among the ancient or modern philosophers, Bayle not excepted. . . . That all his arguments, though otherwise intended, are, in reality, merely sceptical, appears from this, *that they admit of no answer and produce no convic-*

regards as the proof of his own. Their failure leads him, however, not to reject their view of sense—it was not rejected even by Kant—but to criticise their view of the function of reason. We cannot by means of reason explain any of the ultimate characteristics of our experience—the origin of our sensations, the true 'secret' nature of causal connexion, apprehension of external reality, appreciation of beauty, judgment of an action as good or bad. And the alternative is not scepticism, but the practical test of human validity. Certain beliefs or judgments (Hume makes no distinction between belief and judgment, or indeed between judgment and reasoning[1]) can be shown to be 'natural,' 'inevitable,' 'indispensable,' and are thus removed beyond the reach of our sceptical doubts. "The sceptic . . . must assent to the principle concerning the existence of body, though he cannot pretend by any arguments of philosophy to maintain its veracity. Nature has not left this to his choice, and has doubtless esteemed it an affair of too great importance to be trusted to our uncertain reasonings and speculations. We may well ask, *What causes induce us to believe in the existence of body?* but 'tis vain to ask, *Whether there be body or not?* That is a point which we must take for granted in all our reasonings."[2]

Belief in causal action is equally natural and indispensable; and Hume freely recognises the existence of 'secret' causes, acting independently of our experience. This causal action shows itself both in the mental and in the natural world. Association is "a kind of Attraction, which in the mental world will be found to have as extraordinary effects as in the natural, and to show itself in as many and as various forms. Its effects are everywhere conspicuous; but as to its causes, they are mostly unknown, and must be resolved into *original* qualities of human nature, which I pretend not to explain."[3] And speaking in the Enquiry of causes in the natural world: "[The really] ultimate springs and principles [of natural operations] are totally shut up from human curiosity and enquiry. Elasticity, gravity, cohesion of parts, communication of motion by impulse; these are probably the ultimate causes and principles which we shall ever discover in nature; and we may esteem ourselves sufficiently happy, if, by

tion. Their only effect is to cause that momentary amazement and irresolution and confusion, which is the result of scepticism." Italics are Hume's own.

[1] *Treatise*, i., iii., vii.; G., note to p. 396; S-B., note to p. 96.
[2] *Ibid.*, i., iv., ii.; G., p. 478; S-B., p. 187. Italics are Hume's own.
[3] *Ibid.*, i., i., iv.; G., p. 321; S-B., pp. 12-13.

accurate enquiry and reasoning, we can trace up the particular phenomena to, or near to, these general principles. The most perfect philosophy of the natural kind only staves off our ignorance a little longer: as perhaps the most perfect philosophy of the moral or metaphysical kind serves only to discover larger portions of it."[1]

To turn now to the self. Hume contends that we have no grounds either in experience or in reason for declaring the self to be a simple unchanging substance. Complexity and change are the most prominent characteristics of our human nature. "The identity which we ascribe to the mind of man is only a fictitious one, and of a like kind with that which we ascribe to vegetables and animal bodies."[2] "In a very few years both vegetables and animals endure a *total* change, yet we still attribute identity to them, while their form, size, and substance are entirely alter'd. An oak that grows from a small plant to a large tree, is still the same oak; tho' there be not one particle of matter, or figure of its parts the same. An infant becomes a man, and is sometimes fat, sometimes lean, without any change in his identity."[3] By calling such identity 'fictitious,' Hume, as his comparison of the self with plants and animals would seem to show, does not mean to assert that strictly there is no such thing as an identical self, but only that an absolute constancy is not part of its essential nature. As he indicates in the *Treatise*, all that seems to correspond to this assumed metaphysical constancy is identity of function. In the self, as in a plant or animal, the parts of each conspire to a common end, and this end persists throughout the most radical transformations.[4] The complexity of the self is as obvious as its changeableness: "Nothing seems more delicate with regard to its causes than thought. . . . A difference of age, of the disposition of his body, of weather, of food, of company, of books, of passions; any of these particulars, or others more minute, are sufficient to alter the curious

[1] *Enquiry*, iv., i.; G., p. 27; S-B., pp. 30-31; *cf. Treatise*, i., iii., v.; G., p. 385; S-B., p. 84: "As to those *impressions* which arise from the *senses*, their ultimate cause is, in my opinion, perfectly inexplicable by human reason, and 'twill always be impossible to decide with certainty, whether they arise immediately from the object, or are produc'd by the creative power of the mind, or are deriv'd from the author of our being. Nor is such a question any way material to our present purpose. We may draw inferences from the coherence of our perceptions, whether they be true or false; whether they represent nature justly, or be mere illusions of the senses."

[2] *Treatise*, i., iv., vi.; G., p. 540; S-B., p. 259; *cf. ibid.*, G., p. 535; S-B., p. 253; *Dialogues*, vii.; G., pp. 422-423.

[3] *Treatise, loc. cit.*; G., p. 538; S-B., p. 256.

[4] *Loc. cit.*

machinery of thought, and communicate to it very different movements and operations. As far as we can judge, vegetables and animal bodies are not more delicate in their motions, nor depend upon a greater variety or more curious adjustment of springs and principles."[1]

Our belief, then, in the identity and unity of the self, like our belief in an external world, though determined for us by nature, cannot be justified by reason. The ultimate nature of the self cannot be known, and on theoretical grounds no abiding personality can be proved. But so far from denying the existence and reality of the self, Hume seeks—like Kant, though in a very different manner—in its ultimate constitution, in its propensities, instincts, feelings, and emotions, the explanation of all experience, whether theoretical or practical. "'Tis evident, that all the sciences have a relation, greater or less, to human nature; and that however wide any of them may seem to run from it, they still return back by one passage or another."[2] It is the capital or centre of all knowledge, and once masters of it we can extend our conquests over all those sciences which intimately concern us. "In pretending, therefore, to explain the principles of human nature, we in effect propose a complete system of the sciences, built on a foundation almost entirely new, and the only one upon which they can stand with any security."[3]

[1] *Dialogues*, part iv.; G., p. 408. It may be noted how Hume, spite of his speaking of the self as a 'bundle or collection' of distinct impressions, constantly compares it with organisms, with the unity of a plant, of an animal, of society. *Cf. Treatise*, i., iv., vi.; G., p. 542; S-B., p. 261. "I cannot compare the soul more properly to anything than to a republic or commonwealth, in which the several members are united by the reciprocalities of government and subordination, and give rise to other persons, who propagate the same republic in the incessant changes of its parts. And as the same individual republic may not only change its members, but also its laws and constitutions; in like manner the same person may vary his character and disposition, as well as his impressions and ideas, without losing his identity. Whatever changes he endures, his several parts are still connected by the relation of causation. And in this view our identity with regard to the passions serves to corroborate that with regard to the imagination, by the making our distant perceptions influence each other, and by giving us a present concern for our past or future pains or pleasures." Hume's analysis of the self is unfairly treated when contrasted only with that of Kant, and not rather, as it ought to be, with the views of Locke and Berkeley. On the fundamental point, that the self is not to be described as a simple substance, Kant is in agreement with Hume. When Hume states that the self is *for us* (the limitation is important and should always be noted) only a 'bundle or collection' of perceptions, he is overstating his position in opposition to the equally one-sided view of his opponents.

[2] *Treatise*, Introduction to bk i.; G., p. 306; S-B., p. xix.

[3] *Ibid.*; G., p. 307; S-B., p. xx.

Many difficulties in the way of this interpretation of Hume's position will at once suggest themselves, especially as regards his frequent and very confusing use of the words 'fiction' and 'illusion' in reference to causality, and material body, but consideration of these difficulties I shall defer until I have more completely stated what I regard as being Hume's actual position. As I have already pointed out, Green seems to hold that Hume's principles are all borrowed from Locke and Berkeley, and that his philosophy may be adequately regarded as simply the consistent and thorough development of their fundamental principles. There is, however, much positive teaching in the *Treatise* which is not to be found anywhere in the writings of his predecessors; and his philosophy is throughout inspired by a new conception of knowledge which is in many respects identical with Kant's Copernican idea. This new conception of the nature of experience and of the function of reason has already been indicated, and, if explicitly formulated, would run as follows. The function of knowledge is not to supply a metaphysic, but only to afford us guidance in practical life. If we are content to regard our beliefs as the outcome of the ultimate propensities that constitute our human nature, they can be shown, in their perfect fitness to the calls which things make upon us, to be as wonderfully adapted as any of the animal instincts; but if, on the other hand, we wrongly insist on interpreting them as the conclusions of supposed inferences, they will be found to rest on a mass of contradictions and of theoretically unjustifiable assumptions. Even when philosophers reinterpret the ordinary consciousness, modifying this or that belief, so as to attain a consistent system, they merely create additional beliefs, which, while they do not stand the test of practical life, still continue to contain "all the difficulties of the vulgar system, with some others, that are peculiar to themselves".[1] Hume is thus no sceptic as to the powers of reason, but quite positive that its sole function is practical. The question that has primarily to be decided is not how the fundamental characteristics of experience are to be rationally explained, but what function rational insight can have in our lives. That can only be discovered by observation of the facts, and as man is essentially an active being, these are above all else those of morals. Hume therefore fitly adds as sub-title to the *Treatise* which contains his whole philosophy, that it is "an attempt to introduce the experimental method of reasoning into

[1] *Treatise*, i., iv., ii.; G., p. 499; S-B., p. 211.

moral subjects".[1] Reason is not the guide to action, but, quite the reverse, our ultimate and unalterable tendencies to action are the test of practical truth and falsity. Reason, he contends, is nothing distinct from our natural beliefs, and therefore cannot justify them. His attitude in ethics—that "reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them"[2]—has its exact counterpart in his theory of knowledge. "Giving a different turn to the speculations of philosophers," Hume seeks to establish "a system or set of opinions, which if not true (for that, perhaps, is too much to be hop'd for) [may] at least be satisfactory to the human mind, and [may] stand the test of the most critical examination."[3]

That this is really Hume's conception of the function of reason, and that it leads to a genuinely fresh conception of the nature and conditions of experience, will best be shown by a brief account of the main argument of the *Treatise* and *Enquiry*. But before doing so, I must state the two very distinct meanings which he ascribes to the term 'reason'. "All reasonings may be divided into two kinds, demonstrative reasoning, or that concerning relations of ideas, and moral reasoning, or that concerning matter of fact and existence."[4] The first kind of reasoning is analytic. Since the relations discovered are involved in the ideas compared, being such as cannot be changed without change in the ideas, their truth is guaranteed by the law of non-contradiction. The relations thus revealed are those of resemblance, contrariety, degrees in quality, and proportions in quantity or number; and as the mathematical sciences of geometry, algebra, and arithmetic, involve only such relations, they are rendered possible by such discursive analytical thinking. "That three times five is equal to the half of thirty, expresses a relation between these numbers. Propositions of this kind are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe. Though there never were a circle or triangle in nature, the truths demonstrated by Euclid would for ever retain their

[1] Hume uses the term 'moral' in a very broad sense.

[2] *Treatise*, ii., iii., iii.; G., p. 195; S-B., p. 2.

[3] *Ibid.*, i., iv., vii.; G., pp. 551-552; S-B., p. 272.

[4] *Enquiry*, iv., ii.; G., p. 31; S-B., p. 35. This broad use of the word 'moral' is explained by Hume's view of our knowledge as determined throughout by practical considerations, and as possessing no absolute metaphysical truth.

certainty and evidence."[1] This logical necessity, which consists in the impossibility of conceiving the opposite, is the sole form of rational necessity known to us, and it supplies a standard in the light of which we are enabled to detect its complete absence from all our knowledge of matters of fact. When we seek by means of inference to extend our knowledge of real existence, we make use of certain non-rational synthetic principles which can only be explained as blind instinctive propensities of the human soul. And as this second, synthetic, form of reasoning embraces all knowledge outside mathematics (for even the present testimony of sense and the records of memory involve synthetic principles), it is much the more important, and Hume constantly equates it with reason in general. Reason, he roundly declares, is "nothing but a wonderful and unintelligible instinct in our souls": though it may justify itself by its practical uses, it can afford no standard to which objective reality must conform. "There is no room in mind for any synthetic operation. Analysis Hume admits, but not synthesis. . . . What is called Necessity of Reason, if it does not mean the impossibility because contradictoriness of the opposite (and that is only analytical), has no objective significance; it is merely the expression for a tendency in mind; it is only subjective: 'necessity is something that exists in the mind, not in objects'."[2]

So long as we move about within experience, determining the nature of our given ideas and their discoverable interrelations, analytical thinking with its absolute standard enables us to gain true and certain knowledge. Experience is, however, conditioned by what lies outside it;[3] and as there is no transition, by way of analytical thinking, to these external conditions, they control the mind from without by a merely brute necessity. Through feeling and instinct they determine the mind both in thought and in action. "Nature by an absolute and uncontrollable necessity has determined us to judge as well as to breathe and feel."[4] "All these operations [judgment as to matters of fact, appreciation of beauty, estimation of an action as good or bad] are a species of natural instincts, which no reasoning or process of the thought and understanding is able, either to produce, or to

[1] *Enquiry*, iv., i.; G., pp. 21-22; S-B., p. 25.

[2] Adamson, *Development of Modern Philosophy*, i., pp. 143-144.

[3] This, I should hold, is Hume's implied, though not always fully expressed, point of view.

[4] *Treatise*, i., iv., i.; G., pp. 474-475; S-B., p. 183.

prevent."[1] Hume has even attempted in the *Treatise* to bring the knowledge of relations into line with this account of empirical reasoning. All ideas are simple and relationless. They do not compare, but are as they are; and hence in them lie no relations. "The necessity which makes two times two equal to four, or three angles of a triangle equal to two right ones, lies only in the act of the understanding by which we consider and compare these ideas."[2] This view of mathematical reasoning is, however, inconsistent with Hume's previous account of arithmetical reasoning,[3] and its falsity is virtually admitted by him when he distinguishes between 'philosophical' and 'natural' relations. As Green has so clearly shown, it is precisely in his failure to consider what is involved in the discursive comparing activity of reason that the weakness of his system lies. Had he realised the problems which are involved in our consciousness of relations, in our apprehension of succession quite as much as in the apprehension of causality, he would never have attempted to completely separate analytic and synthetic thinking. He would have recognised that the same problems are involved in both. That he did completely separate them, and that he ascribed to analytical thinking a quite secondary rôle is, however, undoubted. He could not attempt to prove that there is no such thing as rational necessity (for consciousness of it is implied in the proof of its absence); but postulating it in a form for which he could not really account, he seeks to show that owing to the constitution of our experience it cannot be attained in any department of our knowledge of matters of fact. Natural belief takes the place of rational insight.

In the brief summary which I shall now give of Hume's main argument in the *Treatise* and *Enquiry*, my chief aim will be to state the grounds of his naturalistic view of reason, and to show how his philosophy of knowledge culminates in a new theory of belief.[4] I shall first take up Hume's demonstration of the practical value and theoretical irrationality of the ordinary consciousness, and his complementary proof

[1] *Enquiry*, v., i.; G., p. 40; S-B., pp. 46-47.

[2] *Treatise*, i., iii., xiv.; G., p. 460; S-B., p. 166.

[3] *Ibid.*, i., iii., i.; G., p. 374; S-B., p. 71. According to this passage, in arithmetical reasoning we possess a standard of perfect precision and certainty, and in applying it we reason according to the constitution of the numbers compared. And even in geometry, though, on Hume's view, we have no such exact standard, we still reason in accordance with the given sensible appearances.

[4] The reader who is familiar with Hume's argument may omit the first part of the summary.

of the practical worthlessness and equal irrationality of the philosophical reinterpretation of it. Thereafter I shall try to show the close connexion between his theory of knowledge and his ethical teaching.

The fundamental assumption involved in ordinary consciousness, that there is permanence and identity in things, is an excellent example of what is in practice an indispensable belief, and yet is incapable of theoretical justification.[1] The vulgar regard their perceptions as the real things, and therefore as continuing to exist while unperceived, and as remaining identically the same even when they have undergone change. Now we have only to close our eyes to annihilate our perceptions, and as the perceptions that appear on opening them again are new perceptions, separated from the old by an interval, no proof can possibly be offered that they are the same and have existed throughout the interval. As we know nothing but the distinct perceptions, the assertion of their identity merely on the ground of their resemblance must be purely dogmatic.[2] That, however, is but one defect; there is no contradiction involved, such as we find in the further assertions that each thing is a unity and abides throughout all change. Take the classical instance of a piece of wax. The wax is for us nothing but an aggregate of distinct sensations of smell, sound, taste, touch, and sight; and yet we none the less regard it as a single thing. Also though, when placed before the fire, it in melting loses all its previous qualities, and acquires other and different attributes, we still regard it as remaining the same identical piece of wax. That is apparently the inevitable procedure of our minds, and the result is the union of absolute contradictories. For the thing, which is admittedly a compound or aggregate, is hereby asserted to be one and simple, and that which undergoes transformation to remain the same and identical.

What then, Hume asks, are the causes which make us fall into these evident contradictions? Reason (taken in the ordinary sense) cannot be the force at work, for besides that its whole aim is to avoid self-contradiction, it also demands evidence, and, as we have just seen, none can be obtained. It is here, as elsewhere, a 'blind and powerful instinct,' that, demanding no evidence, and ignoring theoretical inconsistency for the sake of practical convenience, necessitates belief.

[1] *Treatise*, i., iv., ii.

[2] I am concerned only to state Hume's actual position and do not seek either to defend or to criticise it. His philosophy rests on the fundamental assumption that the mind can immediately experience only subjective mental states.

Take, first, the belief in identity throughout change. If we observe the gradual changes in the wax when it is put before the fire and melts, at no point is there a break, but throughout the whole process, whereby it entirely changes its outward appearance, the mind is led on through a series of such slight and imperceptible alterations, each change preparing it for a still greater change that follows, that the passage of the mind from first to last is smooth and uninterrupted. The gradual changes accordingly leave a *feeling*[1] of sameness or identity of function in the mind, and this subjective feeling is the sole ground we have for asserting an objective identity in the real objects. Yet owing to the mind's instinctive tendency to spread itself over external objects, and to ascribe to them any feeling they occasion, it is a ground which constrains the mind to believe in the identity of the object throughout all change. Similarly the diverse sensations constituting the wax are so closely associated, no one of them appearing in the mind without immediately dragging the others into consciousness in its train, that the feeling of their mental union inevitably gives rise to the belief in their objective unity.

The philosophers, observing these palpable contradictions, have only made bad worse by seeking rational justification for them. Finding none in what is experienced, they fall back on fiction, feigning a something which they name substance, behind the sensible qualities and distinct from them, and which they suppose to be simple and unchangeable. In this way, as they believe, the contradictions can be removed, the unity and identity being ascribed to the substance, the change and multiplicity to its states. But the evidence for this philosophical theory (and the demand for evidence cannot in this case be avoided, since it is for the satisfaction of reason that it is propounded) is no greater than what exists for the popular doctrine, namely, a subjective feeling in the mind and not any real connexion perceived to hold within or between objects.[2] The philosophers have simply doubled the sensible reality which alone is known, and as the second reality is purely fictitious they are perfectly free to imagine it as will best suit their purposes and cover contradictions. And the assumption of the existence of such substances, besides being incapable of proof, is also useless. As Hume shows

[1] *Cf.* note to p. 161.

[2] Hume's detailed and very subtle proof of this statement I must omit. It is primarily directed against Locke and Berkeley, and would, from their point of view, be very difficult to meet. This whole section (bk. i., part iv., § ii.) is, as Mr. Selby-Bigge remarks, perhaps the most interesting part of the whole *Treatise*.

in reference to Locke and Berkeley, not a single one of the old difficulties is thereby solved. The problem is only pushed back, to reappear, on deeper reflexion, in an uglier form. "By this means [the feigning of occult substances] these philosophers set themselves at ease, and arrive at last, by an illusion, at the same indifference, which the people attain by their stupidity, and true philosophers by their moderate scepticism."[1]

Hume accounts in a similar manner for belief in the self as an abiding existence. Our ideas are so closely united one to another through the bonds of association, that the easy passage of the imagination along the ideas generates the *feeling* of identity, and this subjective feeling in the mind is again interpreted as denoting actual identity of existence. This belief in the permanence of the self performs an indispensable function in our practical life, and from it, therefore, we cannot desire to free ourselves. But this practical function is its sole function, and upon it no metaphysic of the soul can be based.

All such attempts, however, to give theoretical explanation of what can only be practically justified, rest rather on the principle of causality than on the conception of substance. For it is always this principle that is appealed to, when the right to assert an abiding substance is called in question or when its relation to the sensible is sought. As the causal relation holds between distinct and separate events, it affords another, and equally important, example of a relation that can neither be demonstrated as necessary by reason nor verified as actual in experience. Hume's familiar argument in support of this position need not, however, be stated. The one point that I need dwell upon is the determining influence which he assigns to feeling. Though we have no knowledge, rational or empirical, of causal action, we are yet, as practical life demands, firmly convinced of its existence. And here again it is a blind but powerful instinct that apart from all evidence irresistibly inclines the mind to this belief. When ideas have been constantly conjoined they become mentally associated, so that on the presentation of one the mind (through the workings of that unknown force, association) is necessitated to call up the idea of the other. This determination of the mind, this feeling of necessitated transition, is the original of our idea of necessity, causal efficacy and power.[2] Necessity is something that is

[1] *Treatise*, i., iv., iii.; G., p. 510; S-B., p. 224.

[2] Some critics seem to hold that Hume has no right to any such feeling. Certainly Hume cannot pretend to be able to explain *how* the feeling is

felt in the soul, not perceived to hold between objects; and it is due to that fortunately irresistible instinct which leads us to spread ourselves on external objects and to ascribe to them any internal impression which they occasion in us,[1] that our belief in the causal agency of objects and in the personal activity of the self is independent of reasoning and victoriously withstands all the objections that can be raised by reflexion. Only for moments, when we turn away from practical life, can we free ourselves from this belief that we directly apprehend necessary connexion and real activity; and only thus, from this detached philosophical point of view, can we recognise that their real nature can never by any possibility be discovered. The conceptually empty and unmeaning notion of causation is only of practical use within experience, never valid as an instrument for the metaphysical explanation of that experience.

But one of the most important points in Hume's criticism still remains to be stated. Even if we take the term 'cause' as signifying only the customary antecedent, no *inference* to a cause can ever, in any single case, even within experience, be theoretically justified. All that experience has revealed is conjunction in the past, and the inference to similar conjunction in future cases goes upon the assumption that the future will resemble the past. "If there be any suspicion that the course of nature may change, and that the past may be no rule for the future, all experience becomes useless, and can give rise to no inference or conclusion. It is impossible, therefore, that any arguments from experience can prove this resemblance of the past to the future; since all these arguments are founded on the supposition of the resem-

generated, but that does not deprive him of the right to learn from experience that it is, as a matter of fact, generated. His view of reflexion must be kept in mind. Just as we learn from experience that the idea of pain or pleasure, when it returns upon the soul, is followed by the new impression of desire and aversion, hope and fear, which may therefore be called impressions of reflexion, so also experience teaches us that after events have repeatedly succeeded one another there arises in the mind a feeling of necessitated transition from the one to the other. But the generating causes of this feeling like the generating causes of our sensations, can never be discovered. Hume adds in the *Enquiry* (vii., i.; G., note to p. 56; S-B., note to p. 67) that what is called the feeling of effort, resistance, or animal *nisus*, also forms part of the vulgar conception of causal activity. But since this also is pure feeling, it affords to the mind no *knowledge*, that is, *comprehension* of the nature of activity, and indeed is not, save through customary connexion, capable even of indicating its existence. All feeling is in itself blind and unilluminating, and therefore can indicate nothing.

[1] *Treatise*, i., iii., xiv.; G., p. 461; S-B., p. 167.

blance."[1] No sufficient evidence existing for the inference, it must be the outcome of some unreasoning propensity, and that propensity is custom or habit. "For wherever the repetition of any particular act or operation produces a propensity to renew the same act or operation, without being impelled by any reasoning or process of the understanding, we always say, that this propensity is the effect of *Custom*. By employing that word, we pretend not to have given the ultimate reason of such a propensity. We only point out a principle of human nature, which is universally acknowledged, and which is well known by its effects."[2] This custom by leading us to anticipate the future in accordance with the past, and so to adjust means for the attainment of our ends, brings about the required harmony between the course of nature and the succession of our ideas. "Those, who delight in the discovery and contemplation of *final causes*, have here ample subject to employ their wonder and admiration."[3]

But in this 'custom' something more must be involved than has yet come to light, for the ideas introduced by it are, as we say, 'inferences,' and not mere suggestions. "If flame or snow be presented anew to the senses, the mind is carried by custom to expect heat or cold, and to *believe* that such a quality does exist, and will discover itself upon a nearer approach."[4] It would, Hume remarks, be quite allowable to stop our researches at this point, taking custom as a natural propensity of the soul conditioning belief; but, as it happens, we can carry our inquiries a step further. The distinction between a fictitious idea and one that is believed cannot lie in any peculiar idea, such as that of 'reality' or 'existence,' that is annexed to the one and absent from the other.[5] "For as the mind has authority over all its ideas, it could voluntarily annex this particular idea to any fiction, and consequently be able to believe whatever it pleases; contrary to what we find in daily experience."[6] It follows, therefore, as the sole alternative, that the difference between fiction and belief lies in some sentiment or feeling that accompanies all ideas believed. And to verify that conclusion Hume suggests an experiment. "If

[1] *Enquiry*, iv., ii.; G., p. 33; S-B., pp. 37-38.
[2] *Ibid.*, v., i.; G., p. 37; S-B., p. 43.
[3] *Ibid.*, v., ii.; G., pp. 46-47; S-B., p. 55; *cf.* v., i.; G., p. 39; S-B., pp. 44-45.
[4] *Ibid.*, v., i.; G., p. 40; S-B., p. 46.
[5] *Cf.* Appendix to the *Treatise;* G., p. 555 ff.; S-B., p. 623 ff.
[6] *Enquiry*, v., ii.; G., p. 41; S-B., pp. 47-48.

I see a billiard ball moving towards another, on a smooth table, I can easily conceive it to stop upon contact. This conception implies no contradiction; but still it feels very differently from that conception by which I represent to myself the impulse and the communication from one ball to another."[1] Belief superadds nothing to the content of an idea but only changes our manner of conceiving it, rendering it more vivid, forcible and steady, and so causing it to weigh more in the thought, and to have a superior influence on the passions and imagination. All these characteristics we find in a supreme degree in our perceptions; and since perceptions are, apart from inference or evidence, the immediate objects of belief, this view of belief, as being nothing but such vivid and steady apprehension, may be taken as proved.

Perceptions have, however, a further characteristic. As the facts show, they possess the power of conferring upon any ideas that are in any way connected with them a share of their vivacity. Memory-images carry the mind through a connected series of images direct to its present perceptions, and being enlivened by them, take stronger hold upon the mind than does the idea, say, of an enchanted castle. The picture of an absent friend enlivens our idea of him, and also every feeling which that idea occasions. For the same reason the superstitious are fond of the relics of saints and holy men. Now this quality of our perception would also seem to be the cause of belief in an effect suggested by a present perception. The perception of fire conveys to the suggested idea of heat a share of its liveliness, and the idea thereby approximating in force to an impression, the mind necessarily believes in its existence.

Inference, then, instead of being based on the relation of cause and effect and presupposing it, is itself identical with that relation. It is nothing but the custom-bred transition from an impression to an enlivened idea. Just as in his ethics Hume grounds the distinction between moral good and evil not on reason but on certain emotions and passions which are to be found in every man, and which constitute the constant element in human nature; so here in his theory of knowledge he declares the operation of the mind, by which we infer effects from causes, to be, like that of moral judgment, so essential to the subsistence of all human creatures, that it cannot be trusted to the fallacious deductions of our reason. "It is more conformable to the ordinary wisdom of nature

[1] *Loc. cit.*

to secure so necessary an act of mind, by some instinct or mechanical tendency, which may be infallible in its operations, may discover itself at the first appearance of life and thought, and may be independent of all the laboured deductions of the understanding."[1] "Nature by an absolute and uncontroulable necessity has determin'd us to judge as well as to breathe and feel."[2] "All these operations are a species of natural instincts, which no reasoning or process of the thought and understanding is able, either to produce, or to prevent."[3] And, as his whole philosophy is directed to prove, reason can as little explain as control them.

This new theory of belief is the indispensable complement of Hume's new view of the function of knowledge, and was all-important in determining his philosophical attitude. By his predecessors belief had been regarded as purely intellectual, dependent on insight, and therefore at the mercy of the philosophical sceptic; whereas, if Hume's teaching is true, it does not result from knowledge but precedes it, and as it is not caused by knowledge, so also is not destroyed by doubt.[4] By the fortunate construction of our nature, "the conviction, which arises from a subtle reasoning, diminishes in proportion to the efforts, which the imagination makes to enter into the reasoning, and to conceive it in all its parts. Belief, being a lively conception, can never be entire, where it is not founded on something natural and easy."[5] As the mind departs further and further from its ordinary attitude, sinking itself in ideas, "tho' the principles of judgment, and the balancing of opposite causes be the same as at the very beginning; yet their influence on the imagination, and the vigour they add to, or diminish from the thought, is by no means equal".[6] Thus happily, "nature breaks the force of all sceptical arguments in time, and keeps them from having

[1] *Enquiry*, v., ii.; G., p. 47; S-B., p. 55.

[2] *Treatise*, i., iv., i.; G., pp. 474-475; S-B., p. 183.

[3] *Enquiry*, v., i.; G., p. 40; S-B., pp. 46-47.

[4] "Shou'd it be here asked me . . . whether I be really one of those sceptics, who hold that all is uncertain, and that our judgment is not in *any* thing possest of *any* measure of truth and falsehood; I shou'd reply, that this question is entirely superfluous, and that neither I, nor any other person was ever sincerely and constantly of that opinion. Nature, by an absolute and uncontroulable necessity has determin'd us to judge as well as to breathe and feel. . . . Whosoever has taken the pains to refute the cavils of this *total* scepticism, has really disputed without an antagonist, and endeavour'd by argument to establish a faculty, which nature has antecedently planted in the mind, and render'd unavoidable." —*Treatise*, i., iv., i.; G., pp. 474-475; S-B., p. 183.

[5] *Ibid.*; G., p. 477; S-B., p. 186. [6] *Ibid.*; G., p. 476; S-B., p. 185.

any considerable influence on the understanding".[1] They cannot overthrow our natural beliefs without totally destroying our human nature.

Further, all sceptical doubts as to the validity of our natural beliefs rest, not on the demonstration of the falsity of these beliefs, but only on the proofs of the total absence of evidence for them. It is therefore only one possibility against another, and, in our complete and necessary ignorance as to the nature of ultimate reality, all sceptical arguments against trust in these particular beliefs must equally diminish trust in our sceptical doubts. The appeals to reason for and against natural belief mutually destroy one another "till at last they both vanish away into nothing, by a regular and just diminution".[2]

But that does not make an end of our difficulties, for the natural beliefs which we perforce follow, themselves mislead us. And this brings us to the second stage in Hume's argument, his proof, namely, that the philosophical reinterpretation of experience is worthless in practical life, and besides containing all the contradictions of ordinary consciousness possesses in addition certain difficulties peculiar to itself. The philosophical reinterpretation that he has specially in view is the spiritualism and consequent deism of Descartes and his English successors. This line of thought I have already touched upon in stating Hume's criticism of the category of substance, and may now consider it more at length. . What we call 'reason,' and oppose to our natural beliefs, is in reality nothing distinct from these beliefs; and it is just the *de facto* necessity we are under of following them, which gives rise to the philosophical or 'rational' reaction against them. The understanding is nothing but the imagination acting according to its most general and established habits or instincts;[3] and it is because these

[1] *Treatise*, i., iv., i.; G., p. 478; S-B., p. 187.

[2] *Ibid.;* G., p. 478; S-B., p. 187.

[3] *Ibid.*, i., iv., vii.; G., p. 547; S-B., p. 267; *cf.* i., iii., xvi.; G., p. 471; S-B., p. 179. "To consider the matter aright, reason is nothing but a wonderful and unintelligible instinct in our souls." The completeness with which Hume equates reason and instinct, and gives a purely naturalistic explanation of both, is well illustrated in the following passage from the *Dialogues*, vii.; G., pp. 422-423: "These words, *generation, reason*, mark only certain powers and energies in nature, whose effects are known, but whose essence is incomprehensible, and one of these principles, more than the other, has no privilege for being made a standard to the whole of nature. . . . In this little corner of the world alone, there are four principles, *Reason, Instinct, Generation, Vegetation*, which are similar to each other, and are the causes of similar effects. What a number of other principles may we naturally suppose

instincts, when theoretically developed, conflict with one another that the understanding is at variance with itself.[1] Our two most fundamental beliefs are, first, that the objects we perceive have an independent substantial reality, and secondly, that nothing can come into existence save through a pre-existent cause. Now in acquiescing in the first belief we fly in the face of all the inevitable consequences of the causal postulate. This Hume contends has been proved by Berkeley. When we reason from cause and effect we conclude that neither colour, sound, taste, nor smell have independent reality, and when we exclude all these nothing of all that we apprehend remains as real existence. Thus though no abstract arguments drawn from the universal application of the one belief can destroy the other, the necessity of holding both must prevent us from ever being satisfied with either.[2] Hume's argument is primarily directed only against the position of Locke and Berkeley, but it is the same line of thought that it so fruitfully developed in the Critical philosophy. We cannot without self-contradiction acquiesce in our natural belief in the independent reality of the world apprehended through sense-experience.

Again, it is these natural beliefs that induce idle speculation. The belief in causal connexion being instinctive is

in the immense extent and variety of the universe, could we travel from planet to planet and from system to system, in order to examine each part of this mighty fabric ? . . . Reason, in its internal fabric and structure, is really as little known to us as instinct or vegetation ; and perhaps even that vague, undeterminate word, *Nature*, to which the vulgar refer everything, is not at bottom more inexplicable." But though Hume in describing the understanding as nothing but the imagination acting according to its most general and established habits, certainly means to emphasise that it is in essence instinctive and contains no objective standard to which reality must conform, he must not be taken as implying that it is therefore identical with imagination in the ordinary sense, and is a source of arbitrary fictions. The imagination constitutes the deepest element in our human nature, and fulfils the same function as Kant's faculty of understanding : it creates the order of nature out of the detached impressions of sense. " In order to justify myself, I must distinguish in the imagination betwixt the principles which are permanent, irresistible, and universal ; such as the customary transition from causes to effects, and from effects to causes : And the principles, which are changeable, weak, and irregular. . . . *The former are the foundation of all our thoughts and actions, so that upon their removal human nature must immediately perish and go to ruin.*"—*Treatise*, i., iv., iv.; G., p. 511 ; S-B., p. 225. Italics are mine. Hume ascribes an equally important function to imagination in the creation of mathematical science.

[1] We may compare Hume's line of argument with that of 'the Prussian Hume,' 'the all-destroyer'.

[2] Hume's detailed proof is too lengthy to be given. *Cf. Treatise*, i., iv., iv. ; *Enquiry*, xii., i.

unlimited in its pretensions, and leads us, in the pursuit of knowledge, to demand a sufficient cause for all things. But since we have no adequate conception what would be a 'sufficient' cause—Hume further develops this point in his *Dialogues*—either for the world as a whole or for any phenomenon in it, this demand can never be satisfied. In demanding, however, explanation of all things, reason also requires justification for its own demands, and as these rest on blind instinct, for which no theoretical justification can be given, it here again demands the impossible. The demand for 'sufficient' causes is itself insufficiently caused, and in thus insisting on itself it finally brings to light its purely practical function and its non-rational source.

We must, then, draw the 'sceptical' conclusion, that though our natural beliefs are our sole guides they are reliable and legitimate only in practical life. We must limit our inquiries to 'the experienced train of events'. "Nothing else can be appealed to in the field, or in the senate. Nothing else ought ever to be heard of in the school, or in the closet. The more sublime topics are to be left to the embellishment of poets and orators, or to the arts of priests and politicians." "Those who have a propensity to philosophy will still continue their researches; because they reflect, that, besides the immediate pleasure attending such an occupation, philosophical decisions are nothing but the reflexions of common life, methodised and corrected. But they will never be tempted to go beyond common life, so long as they consider the imperfection of those faculties which they employ, their narrow reach, and their inaccurate operations."[1]

But this is a more sceptical conclusion than is strictly demanded by Hume's philosophy. Hume in these and similar passages seems to imply that no really definite and final set of opinions can be arrived at. As he says in the *Treatise*,[2] we must study philosophy in a 'careless manner,' and be as diffident of our sceptical doubts as of our philosophical convictions. On his own showing, however, reason (in its synthetic form) is as necessary as natural belief. It is true that if we seek to reject natural belief in favour of reasoning we are really only rejecting belief in the independent existence of our impressions for belief in their causal dependence—a belief which leads to equally self-contradictory results. But it is also true that if we condemn all

[1] *Enquiry*, xii., iii.; G., p. 133; S-B., p. 162.
[2] *Treatise*, i., iv., vii.; G., p. 552; S-B., p. 273.

refined reasoning, that is to say, all application of the synthetic principles of imagination beyond the sphere of immediate experience, we run into the most manifest contradictions. In either case we entirely subvert the human understanding.[1] The more consistent conclusion would therefore be, that though reason cannot take the place of natural belief, still less overthrow it, its generalising powers are yet necessary for its interpretation and control. Only through the use of our natural beliefs as universal synthetic principles can we discover their limited range and their merely practical worth. This more positive view of the relation of reason to feeling and instinct is also more in agreement with the conclusion which, as we shall see, Hume comes to in his ethical philosophy.[2]

I may now, before passing to Hume's theory of morals, consider the difficulties involved in his use of the terms 'illusion,' 'fiction,' 'propensity to feign,' in reference to our notions of body and of causation.[3] Hume's argument rests throughout on the supposition that perishing subjective states are the only possible objects of mind, and that it is these perishing states which natural belief constrains us to

[1] *Treatise*, i., iv., vii.

[2] Hume's view of the relation between natural belief and synthetic reason may profitably be compared with the very different, though analogous, opposition of understanding and reason in the Critical philosophy. Just as reason discovers the contradictions involved in the conceptions of understanding when universalised, so reason reveals the contradictions involved in our natural beliefs when these are regarded as theoretically true. Also, while Kant shows reason to be helpless apart from understanding, Hume proves reason to be incapable of acting apart from natural belief. And lastly, to complete the analogy, just as Kant's ideas of reason are simply the categories freed from all limitations, so reason is for Hume nothing but our natural beliefs universalised. It is because, when thus universalised, they conflict and lead to insoluble contradictions that we are forced to recognise their purely practical aim. I do not, of course, mean to imply that the views of Hume and of Kant are really akin. Each gives so different a meaning to reason that the tendencies of their systems are quite divergent. The following passage from the *Prolegomena* brings out in a striking manner Kant's agreement with Hume, but is a very inadequate statement of Kant's real position. "The principle of all genuine Idealists, from the Eleatic school to Bishop Berkeley, is contained in this formula, 'All knowledge by sense and experience is nothing but mere appearance, and truth is to be found only in the ideas of pure understanding and reason'. The principle which throughout governs and determines my Idealism is: 'All knowledge of things from pure understanding or pure reason is nothing but mere appearance, and truth is to be found only in experience'."—*Werke* (Hartenstein), iv., p. 121.

[3] As regards the reality of the self, I have already stated (pp. 153, 154, 161 above) all that seems necessary; but Hume's argument as to the reality of material body may be taken, *mutatis mutandis*, as also true of the self.

regard as abiding independent existences. Such belief is obviously, on the above interpretation, sheer illusion and utterly false.[1] It is due to a propensity to feign. Belief in the existence of body does not, however, necessarily involve this identification of the external world with the world perceived. The philosophical theory postulates the double existence of objects and perceptions; and to an objective world, thus conceived as distinct from our fleeting impressions, the terms fiction and illusion cannot be applied. For if the existence of such a world cannot be asserted, just as little can it be disproved. Philosophers, however, though they have sufficient force of genius to free themselves from the vulgar error, have not sufficient insight to keep them from seeking to justify their own theory at the bar of reason. "However philosophical this new system may be esteemed, I assert 'tis only a palliative remedy, and that it contains all the difficulties of the vulgar system, with some others, that are peculiar to itself."[2] Though "it pleases our reason, in allowing, that our dependent perceptions are interrupted and different; and at the same time is agreeable to the imagination, in attributing continued existence to something else, which we call objects," it presupposes the popular theory, and derives all its authority from it. Apart from that theory it can offer no grounds for itself, and therefore can never really displace natural belief by rational judgment.[3]

Now Green, besides ignoring Hume's doctrine of natural belief, misrepresents his position by taking the epithets which concern only the popular theory as applying also to the philosophical. As we have just seen, Hume's utterances from the one point of view are not inconsistent with those from the other. Though the popular belief is an illusion and demonstrably false, the philosophical view, in some one or other of its forms, may be true though it can never be established. And this is all that is required in order to turn the scales in favour of our natural beliefs. They may contain genuine truth though the particular form in which they

[1] In my account of Hume in *Studies in the Cartesian Philosophy* (chap. vi., especially pp. 247-248, 251-252), I have followed the current view more closely than I am now prepared to do. It was quite impossible for Hume to adopt the position which he suggests in the *Treatise* (i., iv., ii.; G., pp. 495-496; S-B., pp. 207-208). An interpretation of this passage, similar to that which I have given in my *Studies*, and open therefore to the objections which I have indicated above, has recently been presented in an interesting manner by Dr. Montague (*Philosophical Review*, January, 1905—'A neglected point in Hume's philosophy').

[2] *Treatise*, i., iv., ii.; G., p. 499; S-B., p. 211.

[3] Here again I can only summarise Hume's argument.

exist is obviously false. The form which they take is influenced by practical convenience, and theoretical consistency is not, therefore, an indispensable condition of their practical truth. The illusions upon which they rest may the better fit them for their immediate end. And since reason is as incapable of correcting as of displacing them, we must accept them in the crude form in which they result from the instinctive equipment of the human mind. Hume candidly admits that such inquiries raise doubts even in his own mind as to the validity of those natural beliefs which he contends to be unavoidable.[1] But this he regards as simply one illustration of how all reflection upon ultimate questions must inevitably lead to uncertainty and doubt. Such philosophical inquiries are both useless and harmful, except in so far as they lead us to detect the inherent impossibility of all metaphysical construction and so constrain us to resign ourselves to our natural beliefs. "'Tis impossible upon any system to defend either our understanding or senses; and we but expose them farther when we endeavour to justify them in that manner. As the sceptical doubt arises naturally from a profound and intense reflexion on these subjects, it always increases, the farther we carry our reflexions, *whether in opposition or conformity to it.* . . . An hour hence he will be persuaded there is both an external and an internal world."[2]

It is, however, in reference to causation that Hume's most ambiguous statements are made. Inference, instead of being based on the relation of cause and effect, and presupposing it, is itself identical with that relation. "Necessity is something, that exists in the mind, not in objects; nor is it possible for us ever to form the most distant idea of it, consider'd as a quality in bodies."[3] "The efficacy or energy of Causes . . . belongs entirely to the soul. . . . 'Tis here that the real power of causes is plac'd along with their connexion and necessity."[4] Before commenting on these passages I may point out that Hume states as strongly as Green himself the objection to this position which at once

[1] *Treatise*, i., iv., ii.; G., p. 504; S-B., p. 217. "I begun this subject with premising, that we ought to have an implicit faith in our senses, and that this would be the conclusion I shou'd draw from the whole of my reasoning. But to be ingenuous, I feel myself *at present* of a quite contrary sentiment, and am more inclined to repose no faith at all in my senses, or rather imagination, than to place in it such implicit confidence."

[2] *Ibid.*; G., p. 505; S-B., p. 218. Italics are mine. *Cf. Enquiry* xii. i.; G., p. 127; S-B., p. 155.

[3] *Ibid.*, i., iii., xiv.; G., p. 460; S-B., pp. 165-166. [4] *Loc. cit.*

suggests itself, namely, that it entirely reverses the natural order of thought and reality, and contradicts the assumption which Hume himself inevitably makes at every turn, even in his proof that we can have no genuine conception of causal agency. "What! the efficacy of causes lie in the determination of the mind! As if causes did not operate entirely independent of the mind, and wou'd not continue their operation, even tho' there was no mind existent to contemplate them, or reason concerning them. Thought may well depend on causes for its operation, but not causes on thought. This is to reverse the order of nature, and make that secondary, which is really primary."[1] Hume's answer to this objection shows very clearly that he does not mean to deny the objective reality of material bodies or their mutual influence. "I can only reply to all these arguments, that the case is here much the same, as if a blind man shou'd pretend to find a great many absurdities in the supposition, that the colour of scarlet is not the same with the sound of a trumpet, nor light the same with solidity. If we have really no idea of power or efficacy in any object, or of any real connexion betwixt causes and effects, 'twill be to little purpose to prove, that an efficacy is necessary in all operations. We do not understand our own meaning in talking so, but ignorantly confound ideas, which are entirely distinct from each other. I am, indeed, ready to allow, that there may be several qualities, both in material and in immaterial objects, with which we are utterly unacquainted; and if we please to call these *power* or *efficacy*, 'twill be of little consequence to the world. *But when, instead of meaning these unknown qualities, we make the terms of power and efficacy signify something, of which we have a clear idea, and which is incompatible with those objects, to which we apply it*, obscurity and error begin then to take place, and we are led astray by a false philosophy."[2]

In the next sentence, however, Hume states his position in an ambiguous manner that goes far to account for the common misunderstanding. He proceeds: "This is the case, when we transfer the determination of the thought of external objects, and suppose any real intelligible connexion betwixt them; *that being a quality, which can only belong to the mind that considers them*".[3] Unless that last sentence is carefully interpreted in the light of its context, the words which I have italicised may seem to involve a conclusion

[1] *Treatise*, i., iii., xiv.; G., pp. 461-462; S-B., p. 167.
[2] *Ibid.*; G., p. 462; S-B., p. 168. Italics in last sentence are mine.
[3] *Loc. cit.* Italics are mine.

which there is nothing at all in Hume's argument to support, and which moreover is in flagrant contradiction with the admissions which he has just made. All that it really says is that causal connexion denotes for us merely a feeling, the feeling of necessitated transition, and that *this, quâ feeling*, can exist only in mind. This, I should contend, is the point of view from which the sentences which I have quoted above, in the beginning of the previous paragraph, must be interpreted. Reading their context this seems quite obviously to be their meaning. To take the strongest of his assertions: "The efficacy or energy of causes is neither plac'd in the causes themselves, nor in the deity, nor in the concurrence of these two principles; but belongs entirely to the soul, which considers the union of two or more objects in all past instances. 'Tis here that the real power of causes is plac'd along with their connexion and necessity."[1] Now what Hume has here in view is the explanation of our causal inferences. The foundation of such inference is the *de facto* transition from cause to effect, arising from repeated union. This transition is in no wise due to the objective nature of either the cause or the effect, but solely to their acquired mental connexion. "The necessity or power, which unites causes and effects, lies in the determination of the mind to pass from the one to the other."[2] Hume's whole meaning, therefore, is that the connexion and necessity *which ground our inferences* can only exist in us; and this does not involve the assertion that objects are incapable of influencing one another independently of mind.

[1] *Treatise*, i., iii., xiv.; G., p. 460; S-B., p. 166.
[2] *Loc. cit.* This is the sentence immediately preceding that which we are now considering.

(*To be continued.*)

II.—HAS MR. MOORE REFUTED IDEALISM?

By C. A. Strong.

Readers of Mr. Moore's 'Refutation of Idealism,' in Mind, N.S., No. 48, cannot fail to have been impressed with its extraordinary merit. Whether we judge it to be successful or not in its main contention, it is certainly a very searching examination of the principles on which Idealism rests. No previous critic of the theory, so far as I know, has gone to work in so minute and logical a manner, or produced so lucidly reasoned and self-consistent an argument. It behoves the Idealist to ask himself whether he can in any way escape from the fine-meshed net which Mr. Moore throws out for him. I think he can, provided his Idealism be of a certain type. And I am emboldened to set forth my reasons for this view by the two facts, first, that I find that this type of Idealism shields me from some of Mr. Moore's most vigorous blows, and, secondly, that I do not recoil from certain rather startling consequences of the theory which Mr. Moore indicates, towards the close of his article, as being the true consequences of Idealism.

I.

Mr. Moore undertakes to show that the principle '*esse* = *percipi*' is false in all the senses that have ever been attached to it. It seems to me a most serious omission that he should not have discussed the application of this principle to our mental states. For almost every one admits that the *esse* of our mental states is *percipi*—that they exist only by our being conscious of them. What would a pain, for instance, be that no one was conscious of? Or a desire that nobody felt? Mr. Moore takes the case of the sensation of blue, and endeavours to prove that the sensation is distinct from the blue and that the blue is the object of the sensation. Would he hold, in the same way, that pain is distinct from and the object of our consciousness of it? And would he argue, as he does in the case of the blue, that

the pain may continue to exist after the consciousness of it ceases?

Paradoxical as it may seem, I believe if he should argue thus he would not be wholly wrong. For by the consciousness of pain I think we usually mean a double fact. There is the pain itself as a mere feeling, and there is a certain amount of thought about it. I rarely experience a pain without saying to myself, What a disagreeable feeling this is, and asking myself what I can do to remove it; or, at the very least, I dimly note its local relations to other parts of the body. In other words, I transform it into an object of thought. But the pain must first exist as a mental fact, as a state of sentiency, before thoughts about it can arise. Possibly in the minds of the lower animals the feeling of pain may exist alone, without giving rise to any thoughts; but in the mind of man I think the experience of every one will bear him witness that they are pretty uniformly present.

Now, the suggestion I would offer is that, when we contrast a pain with our consciousness of it, the fact we refer to by the 'consciousness' is these supernumerary thoughts. We feel ourselves to be *other than* the pain, because we identify ourselves with the thoughts, and the thoughts are really and truly other than it. Indeed, this appears quite plainly when we consider that the pain they are about is, strictly speaking, not the pain that coexists with them but the pain of a moment before, or the pain up to a moment before. We feel ourselves to be *dealing with* the pain, because the thoughts are really and truly about the pain. Thus that by which the pain is present, and that by which it is an object of thought or consciousness, are two distinct mental functions. By the first of these functions the pain exists as a part of our mental being; by the second we are able to deal with it as a relatively external and foreign thing. This external dealing with it is in no way necessary to the pain's existence; subtract the consciousness in this sense, and the pain still remains. But if by the consciousness you mean the feeling, you cannot subtract that without the pain going too.

If the foregoing suggestion be correct, it explains why we have so strong a tendency to think that the *esse* of our mental states is *percipi* or *sentiri*, in the passive. Mr. Moore quite correctly points out that the true sense in which the Idealist should show things to be mental is *percipere* or *sentire*. (And this, moreover, is the type of Idealism to which I referred at the beginning, and which I consider to be proof against Mr. Moore's objections—I agree that his arguments make short work of the other.) But among the

supernumerary thoughts which our mental states arouse are those by which we introspectively observe and study them. To observe a mental state is not to turn a searchlight of intuition upon it that did not illuminate it before, to become conscious of something of which we before were unconscious, but to attend to it in such a way as to permit it to call forth a certain specific kind of thought. The mental state observed exists no otherwise (except for the attentive reinforcement) than when we were not observing it; it simply calls forth this kind of thought. Now, at the very moment when we are engaged in thus attending to and thinking about a mental state, it is hardly to be wondered at if we fancy the objective relation in which it temporarily stands to our thought to be essential to the mental state's existence. We have never met with mental states, as psychologists, except when they were our objects; consequently we fancy their essence is to be our objects. This, of course, is a case of the 'psychologist's fallacy'. Mr. Moore is perfectly right in correcting it and in insisting on the Realistic view of introspection. The existence of the mental state is, as he says, entirely independent of the intellectual consciousness by which we reflectively apprehend it. But the existence of the mental state is by no means independent of consciousness in the sense of feeling.

What the Idealist really means, then, when he asserts that the esse *whether of material objects or of mental states is* percipi *in the passive, is the double fact that they exist as feelings and are thought about.* Idealism is indefensible as an account of the relation between either material objects or mental states and our thoughts about them. But it seems to me to be correct in its assertion that material objects, like mental states, exist as feelings.

II.

But let us come back to the feeling of pain. I can hardly imagine that Mr. Moore would seriously attempt to distinguish between pain and the feeling of it. And yet this is what he is committed to by his theory that consciousness is in all cases a perfectly colourless, abstract, unqualified thing, and that what many writers call its 'content,' and what might better be called its quality, is in reality its *object*. I will venture therefore to point out the difficulties in which he would involve himself by the attempt to carry through such a doctrine.

On the one hand, since the pain is known through the consciousness but is not dependent on it for its existence,

we have to ask ourselves in what shape and with what sort of nature we may conceive it to exist after the consciousness of it is withdrawn. And the mere statement of the question is sufficient to indicate its utter unanswerability. On the other hand, the difficulty of understanding how the pain can exist has its counterpart in the difficulty of understanding how the consciousness can be known. According to Mr. Moore's principles, consciousness is our evidence of the existence of things—not that by which they exist. Very good. We are conscious of the pain: hence we know that it exists. But we are not and cannot be, at the moment at least, conscious of the consciousness: hence we have no evidence that it exists, and our assertion of its existence, and of the presence of the pain to it, seems baseless. If it be said that we learn of its existence the moment after, I point out that at that moment it no longer exists: consequently the consciousness of it cannot be immediate, cannot be intuitive, but must be of the nature of memory. But how can we have memory of that which we have never experienced? In short, if it were true that the pain exists originally, not as a mode of feeling, but as an object of consciousness, that is a truth the knowledge of which we could not legitimately have come by. The theory is therefore self-destructive.

Of course I am far from denying that there is a function of mind by which we have knowledge of things other than our states of consciousness, and even of things that never were or by any possibility could be states of our consciousness at all (and of this function of *thought* I shall say more in the sequel). But my point is, that it is absurd to suppose that our first tidings of the existence of our states of consciousness themselves come to us in this representative manner. On the contrary, we never could have representative knowledge either of our states of consciousness or of anything else if we were not in some way immediately acquainted with our states of consciousness, if they were not *experienced* or *present*, at the moment of their existence —if, in other words, there were not a mental function of *feeling* distinct from that of thought. These will be familiar considerations to readers who have occupied themselves with the question of the 'Pure Ego'; but I see no evidence in Mr. Moore's paper that he is aware his Realism involves all the difficulties of Prof. Ward's theory of the Subject, and is open to the objections which Mr. Bradley has so effectively urged against that theory, especially in his article 'A Defence of Phenomenalism in Psychology,' in MIND, N.S., No. 33.

We must not overlook, however, the two rather striking passages in which Mr. Moore lets us see what would probably be his attitude towards the second of the above-mentioned difficulties. These passages are so important that I will quote the principal sentences. On p. 446 he tells us—discussing the question, it is true, with reference to the sensation of blue—that the element of consciousness in the sensation is "extremely difficult to fix. . . . That which makes the sensation of blue a mental fact seems to escape us; it seems, if I may use a metaphor, to be transparent—we look through it and see nothing but the blue." And again on p. 450: "The moment we try to fix our attention upon consciousness and to see *what*, distinctly, it is, it seems to vanish: it seems as if we had before us a mere emptiness. When we try to introspect the sensation of blue, all we can see is the blue: the other element is as if it were diaphanous".

In considering these passages, we must bear in mind that they do not refer to the mere experience or sensation of blue, as distinguished from introspective knowledge of it — Mr. Moore does not mean to say that in the mere experience or sensation the element of consciousness appears diaphanously. Such a view would be in patent contradiction with his theory. For his theory is that the object of consciousness is always other than the consciousness, and it is impossible therefore that the consciousness should at the same time be its own object, or in any way aware of itself. In the mere experience the element of consciousness is not diaphanous, it is wholly invisible. Mr. Moore's passages refer rather to the way in which consciousness appears when we try to observe it introspectively, and for the first time become conscious of it. And they involve a peculiar theory of the nature of introspection. The introspective consciousness by which we apprehend a sensation is not conceived as *subsequent* to the sensation, for this again, on his theory, would involve an absurdity: we should be dealing in memory with that which we had never experienced. A mental state that was invisible at the moment when it existed cannot emerge into visibility by the very process by which it ceases to be. Mr. Moore's idea is rather that the introspective consciousness and the mental state which it observes are *simultaneous*—that the introspection catches the mental state, as it were, in the act. The mental state lasts, that is to say, a certain length of time; during the first part of its existence we form the design of introspectively observing it, and when this design is fully formed it is put into execution upon the portion of the mental state which then continues to exist. There are

thus in introspection two parts, so to speak, to our consciousness: on the one side the sensation, say, of blue, and on the other side the consciousness of this sensation, the consciousness of the consciousness.

Now, I am not concerned to deny that our consciousness may be thus complex, that there may be two parts to it each with its own object: on the contrary, I should conceive this view to be borne out by the facts. But what I feel sure of is that *the second part of our consciousness never refers to or has cognitively to do with the first part of our consciousness, but always with the consciousness of an earlier moment.* And, in proof of this, I can only repeat the statements already made in regard to the nature of introspection. To observe a mental state —a pain, for instance—is not to bring forth a second mental state that intuites or reduplicates the first, as if the pain were not sufficiently present to us by the mere fact of its existing; but to think about it in a certain way. And the thoughts that constitute such introspective observation have to be called forth by the mental state in order that they may be true of it. This is a process taking place in time, and having the necessary result that the introspective thoughts are later than the mental state to which they refer. We have only to consider the matter from the physiological point of view to see that this must be so. The processes of our thinking run parallel with processes in the brain; one brain-process must call another forth in order that that other may be logically related to or explicative of it; and, if one calls the other forth, the two cannot be simultaneous. I conceive that physiological and comparative psychology bear with their whole weight in favour of this view.[1]

The introspective consciousness is necessarily subsequent, then, to the mental state with which it has to do; and it cannot legitimately have to do with it unless the mental state was *experienced*, or in some way immediately given, at the moment of its existence. Deny that the mental state was experienced, that the element of consciousness was given in and with the quality, at that moment, and it becomes a thing which we have no means of entering into relations with or making the acquaintance of at all.

In short, Mr. Moore's whole theory rests on the proposition that what we are conscious of (not merely in the sense

[1] *Cf.* Prof. Stout's account of what it is to think of a sensation as such, *Analytic Psychology*, vol. i., p. 44, and Prof. James's treatment of introspection, *Principles of Psychology*, vol. i., pp. 189-190. Is not Mr. Moore employing his uncommon logical powers upon the basis of an insufficient psychology?

of thought, for which the proposition would be perfectly true, but in that of feeling), is always other than the consciousness, that our consciousness of things is to be sharply distinguished from the things themselves; and it now appears that this conception has only the single slight flaw, that you cannot explain, consistently with sound views of introspection, how you ever learned there was such a thing as the consciousness. The truth is that you never did learn it, and that there is no such thing as consciousness in this sense. The consciousness of blue, as something over and above the actually given blue—unless you mean by it the supernumerary thoughts referred to above—is a pure fiction, an hypostatisation of the fact that the blue is capable of becoming an object of thought. *La conscience n'existe pas*, says a French writer[1]—that is, as something over and above the actually given thoughts and feelings that compose our minds. As a name for the totality of those thoughts and feelings, it is of course existent enough.

III.

I must assume that I have now established, as against Mr. Moore, the existence, side by side with the function of thought, of a function which we may call feeling; the difference between the two being this, that by the function of thought we are made aware of things other than the consciousness of them, while in feeling we are immediately aware of the concrete nature of the feeling itself. I must now attempt, by means of a doctrine which I think most fair-minded persons will admit to be simply inevitable in the case of an experience like pain, to construe the difficulties which Mr. Moore has so ingeniously pointed out in the case of sensation.

When Mr. Moore distinguishes between blue and the consciousness of it, it seems to me that the contrast he primarily has in mind is that between blue as an immediate experience and certain thoughts which he has about it, but which are by no means necessarily present in the mind of every person who experiences blue. If we examine what is the nature of these thoughts, I think we find the most im-

[1] Quoted in James's *Principles of Psychology*, vol. i., p. 305 note. I have not been able to look up the passage, but from the context in which it is cited the meaning would appear to be as indicated. Since the above was written, Prof. James has definitely maintained the thesis in question in an article in the *Journal of Philosophy* for 1st September, 1904, entitled 'Does "Consciousness" Exist?' the standpoint of which is essentially that of the present paper, and to which I am glad to be able to refer the reader.

portant and fundamental among them to be of two kinds: there are those by which the blue is conceived as part of the physical world, as in a certain vaguely felt spatial relation to my body, as the quality of a more or less permanent physical object; and there are those by which it is thought of as belonging to the train of experiences which constitutes my mind. In other words, the 'consciousness' of the blue is the consciousness of its relations to other things. But there is another contrast, of an entirely different character, which I think co-operates with this one to produce our confused impression that blue is one thing and the consciousness of it another. This is the contrast between blue as merely conceived, without reference to the fact of its being actually given or not, and blue as actually given—a logical, now, as distinguished from a psychological contrast. We are able to think of blue when it is not actually given, and therefore, even when it is given, we are able to think of it in abstraction from the fact of its givenness. The givenness thus comes to seem a separate fact, added on to the blue itself. It is the confused sense of this double contrast, as it appears to me, which is at the root of our common-sense conviction that the blue first exists and then, by an external act of the mind, is experienced or perceived.

If this be the correct account of the matter, then, in the simple experience of blue, there is no ground whatever for opposing the blue to the experience and considering the former to be the object of the latter. The relation of subject and object exists only where there is thought. In simple sensation or feeling, the quality is the concrete description of the nature of the awareness, as the awareness is the mode of existence of the quality. I do not say that the quality is the 'content' of the awareness, for I do not know what 'content' in such a case would mean. The word 'content' is a convenient one to use where we wish to indicate that a particular thought or feeling is present with others in the mind, and so forms a part but not the whole of the momentary field of consciousness. The thought or feeling is then in a true sense *contained* within that field. But if only a single thought or feeling were present, I do not know in what sense its quality could be said to be the 'content' of its awareness. The expression would imply an unreal separation between the two and a sort of subject-object relation between them, and so be only a subtle way of contradicting oneself. I think we must hold that the quality is neither the object nor the 'content' of the awareness, but simply the description of its nature.

But why, in that case—to come to another of Mr. Moore's difficulties—do we hesitate to speak of a 'blue awareness'? I think for the following reasons. In the first place, by 'awareness' we are wont to understand intellectual rather than sensational consciousness, and we know very well that blue can only be the *object* of the former. Secondly, we are accustomed to predicate colours of physical objects, and the phrase a 'blue feeling' consequently suggests that the feeling is an object which can be seen. Indeed, to speaking of a 'painful feeling', we have no similar objection. And, even in the case of the blue, you have only to insert a hyphen, and make it a 'blue-feeling' or a 'blue-sensation,' for all difficulties to be miraculously removed. So true is it that our instinctive sense recognises blue to be a mode of experience or consciousness.

One of the cleverest things in Mr. Moore's article is the "kind of antinomy" (p. 442) by which he seeks to prove that the experience of a colour is distinct from the colour itself as a given fact. I will quote his statement of it. "(1) Experience is something unique and different from anything else; (2) Experience of green is entirely indistinguishable from green: two propositions which cannot both be true." Of course Mr. Moore will admit that if the particular thing on whose uniqueness and difference from everything else we were insisting was *existence*, the word 'existence' might be substituted for 'experience' in the above passage without creating any such antinomy. For, as Kant has told us, existence is not a real predicate, and a hundred dollars in my mind are entirely indistinguishable from a hundred dollars in my pocket. But to prove that experience is the same thing as existence is of course the whole difficulty for the Idealist. We seem, however, to have succeeded at least in proving that the existence of a pain is the same thing as the experience of it, and for this special case therefore the antinomy disappears: (1) Feeling is something unique and different from anything else; (2) Feeling of pain is entirely indistinguishable from pain—two propositions between which I do not think even Mr. Moore will discover any incompatibility. And, if we have succeeded in showing that blue is, like pain, essentially a mode of feeling or experience, then the antinomy would disappear in the case of blue as well.

In short, the force of the antinomy seems to depend on an ambiguity in the first proposition by which the Idealist is made to admit something opposed to his fundamental doctrine. Almost every one will allow that feeling or con-

sciousness is "unique and different from anything else" in this sense, that there is a respect in which blue and red, or blue, sour, and hot, agree, and a respect in which they differ; as almost every one will allow that existence is unique and distinct from anything else in the same sense. That is, we mean something definite by the word. But the antinomy has force only on the supposition that the other things from which consciousness differs—pain, for example—can exist, so to speak, unmixed with consciousness,[1] or can be considered without consciousness being seen to be necessarily implied in them. That consciousness is necessarily implied in pain we see at a glance. That it is necessarily implied in green or blue, we see, I think, after a little reflexion. Consciousness is "unique" in the sense that it is distinguishable from everything else, but it is not unique in the sense that other things can be conceived without consciousness being implied in them or that consciousness can be conceived as a particular existence side by side with other things.

IV.

I think I have now perhaps dwelt sufficiently on the case of sensation to show how I should endeavour to meet Mr. Moore's arguments, and on what grounds I should base my contention that, so far as sensation is unaccompanied by thought, we are not aware in it of anything distinct from our own states of mind. But I have expressly admitted and

[1] This phrase, written before seeing Prof. James's article 'Does "Consciousness" Exist?' (*Journal of Philosophy*, 1st Sept., 1904), would certainly seem to lay me open to the charge of holding the 'menstruum' theory of consciousness which he there condemns; and yet I think not with justice. For I conceive the quality and the consciousness to be two aspects, not two parts, of the whole which they form; and in this whole I recognise no inner duality. The relation of these two aspects is like that of quality and intensity as characters of sensation, which do not imply any duplicity in the sensation itself. Similarly, the 'experiences' of which Prof. James speaks may vary in quality—red, cold, sweet, houses, animals—or they may vary in that character which constitutes the introspective *fact* in attention and which psychologists call 'clearness'. *In virtue of this last mode of variation we speak of them as facts of consciousness.* Consciousness is therefore a line of variation, or dimension, of all 'experiences' whatever (indeed, I do not know what else we mean by calling them 'experiences'); they do not *become* facts of consciousness by a subsequent process, by being put together or thought about in a certain way, but they are so inherently. Moreover, it is the line of variation by which they exist or fail to exist. In this psychological sense, then, consciousness is the most fundamental of facts. It is only as an entity distinct from all concrete experiences and cognitive of them that I understand Prof. James to deny its existence.

insisted that there is also a function of thought by which we *are* aware of things distinct from our own states, and the question arises how these two functions are to be reconciled with each other, which of them is the more original and fundamental, and whether it is possible to maintain that feeling in no way looks beyond itself without being shut up in a similar subjectivism in the case of thought. The difficulty presents itself thus: If what is present to the mind in feeling is simply the concrete nature of the feeling, thought too, being in one aspect a psychic existence or mode of feeling, must have a concrete nature which is immediately present to the mind in the same way as the concrete nature of the feeling is, and how then shall the *object* of the thought be present also? The concrete nature of the thought seems to rise like an emanation and shut out the object of the thought from view. Or, to use a different figure, a rivalry springs up between the object of the thought and its 'content' or quality, to determine which of the two shall be present to consciousness, and it seems that on Idealistic principles the 'content' or quality must win the day, with the result of a pure subjectivism.

I offer Mr. Moore my sincere compliments on the admirable lucidity with which he has worked out (p. 452) the seemingly subjectivist consequences of Idealism. He sees, I am convinced, more correctly than many of its professed champions what the Idealistic theory really involves. Only he is mistaken in supposing that these consequences are so extravagant that no one would care to maintain them. With a little interpretation that does not alter the fundamental sense, the Idealist may accept every word he says, and rejoice to find a fellow-philosopher who, though a Realist, sees the logic of the question as he sees it himself.

Let me quote Mr. Moore's passages: "But, if so, then, when any Idealist thinks he is *aware* of himself or of any one else, this cannot really be the case. The fact is, on his own theory, that himself and that other person are in reality mere *contents* of an awareness, which is aware *of* nothing whatever" (p. 452). Take the words "awareness," "aware of," here in the sense of what is immediately felt or experienced as distinguished from what is signified or represented, overlook the fact that signifying or representing may be entitled to be called 'awareness' in another sense, and this is a perfectly accurate statement of implications of a theory of cognition which Prof. James first, to my knowledge, set forth in an article in MIND for 1885 on 'The Function of Cognition,' and the subjective side of which—the very side

which Mr. Moore brings out with such clearness in the foregoing passage—was enunciated, not as a paradox but as an evident truth, by Dr. Dickinson S. Miller in an article in the *Philosophical Review* for 1893 called 'The Meaning of Truth and Error'.[1]

The fact that we are not aware of, in the sense of immediately experiencing, that of which we think is perhaps most clear where what we think of is another person's mind. We have a state of consciousness which is immediately given and which stands to us as a symbol of his mind, but that that state of consciousness and the mind which it symbolises are not only numerically different but widely unlike each other in quality is, I should say, sufficiently evident. I find it difficult to believe that Mr. Moore means seriously to maintain the *intuitional* view of our knowledge of other minds which would seem to be suggested by his remark (p. 451) that Idealists "hold for instance that they are sometimes aware of other minds, which continue to exist even when they are not aware of them"—as if the relation of our consciousness to other minds when we think of them were not *toto coelo* different from its relation to material objects when we perceive them, the latter being *present* and the former *absent*. But now, the case of other minds is the type of all cases of objects of thought: *whatever is thought of is* eo ipso *absent and merely represented, and never in any case given as an immediate experience. Nothing can be given as an immediate experience except modifications of the knowing consciousness itself.* We seem to *intuite* our own subjective existence merely because the thought of it follows immediately upon and is separated only by a hair's breadth from the experience. But the only way to be *really* (*i.e.*, not merely representatively) aware of ourselves is to have (= be) the thoughts and feelings in which our being consists. In the same way, we seem to intuite material objects and yet to be distinct from them merely because the thought of them (that which constitutes our consciousness that they are material objects) follows directly upon the sensations in which their being consists.[2]

[1] I have given an account of this theory, and suggested certain modifications and additions which it seems to require, in an article entitled 'A Naturalistic Theory of the Reference of Thought to Reality,' in *Journal of Philosophy*, 12th May, 1904. Prof. James's latest statement of it will be found in his article, 'A World of Pure Experience,' *Journal of Philosophy*, 29th Sept., 1904.

[2] Though I do not hesitate in the text to identify material objects with our sensations, the general argument of this paper would of course be perfectly consistent with the *other* possible Idealistic view, namely, that

The second part of Mr. Moore's passage is not less perspicacious and admirable than that which I have just discussed. "And further if everything, of which he [the Idealist] thinks he is aware, is in reality merely a content of his own experience, he has certainly no *reason* for holding that anything does exist except himself: it will, of course, be possible that other persons do exist; solipsism will not be necessarily true; but he cannot possibly infer from anything he holds that it is not true" (p. 452). I cannot say with how keen a sense of satisfaction I read this passage; for it is the confirmation, from an exceedingly keen and lucid thinker, of a doctrine in regard to the *non-rational nature of transcendence* to which I had been led in the development of my Idealistic views, and especially by considering the impossibility of giving a rational proof of the existence of other minds.[1] The doctrine that we transcend our subjective states by instinct rather than by reason is open to misapprehension. The meaning is not that the subjective state is *given as an object of thought*, and that we are then impelled by an irrational instinct to pass beyond it to a reality which it represents. It is rather that the subjective state *constitutes our being*, and that we find ourselves acting as if what we had to do with were not the state itself but a reality beyond it—the only explanation we can give of our acting thus being that we are formed by nature to act so. I fully admit that the momentary state is never an object of consciousness, and that we do not pass from the state to its object by a conscious process but have to do with the object from the outset, so that we can consider the state only by an epistemological abstraction. But it seems to me that, when we so consider it, we find the state and its object to be separate, to be two, and can discern

material objects are ideal constructions which we undertake upon occasion of our sensations. Personally, I am unable to reconcile this intellectualistic view with the fact that material objects are something we see and touch. That the plain man attributes characters to material objects which cannot possibly be true of his sensations, I have not the smallest doubt; the physical world *as we conceive it* differs in important respects from the portions of that world which are given in our sensations (*cf.* Prof. Stout's paper on 'Primary and Secondary Qualities' in *Proc. Aristot. Soc.* for 1904); but it seems to me as little open to doubt that what the plain man attributes those characters to is his sensations. If I were not afraid of speaking with too great levity, I should say he had a habit of lying about these—a habit the innocuousness and even utility of which is due to the fact that material objects stand for things-in-themselves of which those characters are true.

[1] See my book *Why the Mind has a Body*, pp. 216-219, 273-274, and my 'Reply to Prof. Bakewell,' in *Philosophical Review* for May, 1904, pp. 339-340.

no bond between them, no proof that the state represents a reality, beyond the fact that we are impelled by a natural instinct to act as if it did.

One more sentence of Mr. Moore's, and I have done with this aspect of the question. "His [the Idealist's] existence [and the spirituality of reality—this does not immediately concern us] are *contents* of an awareness, which is aware of nothing—certainly not, then, of its own content." Here again the Idealist may accept every word. The passage is an exact description of the necessary position of the Subject or Pure Ego—and of any thought or feeling which may happen to form part of the Subject or Pure Ego—with reference to 'awareness' in the sense of thought. It is an excellent statement of the difficulties—or rather paradoxes, for our understanding, accustomed to construe all things in terms of objects-of-thought—in the notion of that immediate experience in which alone the being of the Subject or Pure Ego can rationally consist.[1]

So much for thought, and for the difficulties which it seems to present in so far as the object of thought must be held to be other than the state of consciousness that does the thinking. A just estimate of the *function* which our states of consciousness may still subserve in standing for things beyond them, in enabling us rightly to adjust our relations to those things, and in carrying us forward to the next thought in a consecutive and rational manner, seems to me to deprive this objection to Idealism of all weight.

V.

I will bring this article to a close by saying a few words about Mr. Moore's application of the Realistic principle which he conceives himself to have established to the question of the existence of matter. This principle is that consciousness, being numerically separate from the things which it knows, by its very essence informs us of the existence of things that are independent of it. Or, to state the principle in Mr. Moore's own words: "This awareness is . . . of such a nature that its object, when we are aware of it, is precisely what it would be, if we were not aware" (p. 453). (Observe that, on any view, this is a perfectly correct and valid principle *as applying to thought;* but the Idealist

[1] On the inapplicability of the subject-object relation to immediate experience, see my discussion 'Prof. Bakewell on the Ego,' *Philosophical Review*, Sept., 1904, pp. 547-548.

holds precisely that material objects do not exist for us primarily as objects of thought, or of an intuition assimilated in its character to thought, but as experiences, sensations.)

According to this principle, then, when we perceive a material object perception informs us, not merely that the object exists, but also that it *would have existed* in exactly the same way even if we had not perceived it. In other words, it informs us of the *independent existence* of the object. But there is a detail in regard to this independent existence which Mr. Moore neglects to bring out; and I confess to no little surprise that it should have escaped the attention of so keen a logician. Perception, on his theory, informs us that the object would have existed, even if it had not been perceived, *at the moment when the perception actually took place*, but it does not inform us that it would have existed *at any other moment*. If, for instance, I look at my watch at ten o'clock and again at three o'clock, I learn that it would have existed at ten and at three even if I had not perceived it; but I do not learn that it existed during the interval between those hours, or that it existed before ten o'clock and after three. I learn that it existed, and that it existed independently, at the times when the perception actually took place, but not at any other times. Perception testifies to precisely what we perceive, and no more. The only way to assure ourselves that the watch existed during the interval between ten and three o'clock would be to perceive it continuously throughout that interval.

Even on Mr. Moore's theory, then, our certitude of the existence of objects is limited to the moments at which we perceive them. They still retain the irregular outlines—the rough edges, so to speak—and the 'momentary and fleeting' character that are peculiar to our perceptions. Mr. Moore has succeeded in detaching them *spatially*, if I may so say, from our perceptions of them, but he has not succeeded in detaching them *temporally*. He has proved or seemed to prove their *independence*, but he has not made the least progress towards proving their *permanence*. And this for the very simple reason that, even on his theory, although consciousness is not the principle by which things exist, it is yet our sole evidence of their existence, and we have no ground for asserting their existence where this evidence is lacking.

But if even on Mr. Moore's theory material objects still retain the rough outlines and the intermittent existence which are characteristic of our perceptions, I leave it to the reader to say whether it is the Realist or the Idealist who

has the better of the argument. He will perhaps see in the impossibility of establishing the permanence of objects without going wholly beyond any data which consciousness can possibly furnish us an additional reason for looking with suspicion upon Mr. Moore's supposed proof of their independence.

III.—HUMANISM AND TRUTH ONCE MORE.

By William James.

Mr. Joseph's criticism, in the last number of Mind, of my article 'Humanism and Truth' is a useful contribution to the general clearing up. He has seriously tried to comprehend what the pragmatic movement may intelligibly mean; and if he has failed, it is the fault neither of his patience nor of his sincerity, but rather of stubborn tricks of thought which he could not easily get rid of. Minute polemics, in which the parties try to rebut every detail of each of the other's charges, are a useful exercise only to the disputants. They can but breed confusion in a reader. I will therefore ignore as much as possible the text of both our articles (mine was inadequate enough) and treat once more the general objective situation.

As I apprehend the movement towards humanism, it is based on no particular discovery or principle that can be driven into one precise formula which thereupon can be impaled upon a logical skewer. It is much more like one of those secular changes that come upon public opinion overnight, as it were, borne upon tides 'too full for sound or foam,' that survive all the crudities and extravagances of their advocates, that you can pin to no one absolutely essential statement, nor kill by any one decisive stab.

Such have been the changes from aristocracy to democracy, from classic to romantic taste, from theistic to pantheistic feeling, from static to evolutionary ways of understanding life—changes of which we all have been spectators. Scholasticism still opposes to such changes the method of confutation by single decisive reasons, showing that the new view involves self-contradiction, or traverses some fundamental principle. This is like stopping a river by planting a stick in the middle of its bed. Round your obstacle flows the water and 'gets there all the same'. In reading Mr. Joseph, I am not a little reminded of those Catholic writers who refute Darwinism by telling us that higher species can-

not come from lower because *minus nequit gignere plus*, or that the notion of transformation is absurd, for it implies that species tend to their own destruction, and that would violate the principle that every reality tends to persevere in its own shape. The point of view is too myopic, too tight and close to take in the inductive argument. You cannot settle questions of fact by formal logic. I feel as if Mr. Joseph almost pounced on my words singly, without giving the sentences time to get out of my mouth.

The one condition of understanding humanism is to become inductive-minded oneself, to drop rigorous definitions, and follow lines of least resistance 'on the whole'. "In other words," Mr. Joseph may probably say, "resolve your intellect into a kind of slush." "Even so," I make reply,— "if you will consent to use no politer word." For humanism, conceiving the more 'true' as the more 'satisfactory' (Dewey's term) has to renounce sincerely rectilinear arguments and ancient ideals of rigour and finality. It is in just this temper of renunciation, so different from that of pyrrhonistic scepticism, that the spirit of humanism essentially consists. Satisfactoriness has to be measured by a multitude of standards, of which some, for aught we know, may fail in any given case; and what is 'more' satisfactory than any alternative in sight, may to the end be a sum of *pluses* and *minuses*, concerning which we can only trust that by ulterior corrections and improvements a maximum of the one and a minimum of the other may some day be approached. It means a real change of heart, a break with absolutistic hopes, when one takes up this view of the conditions of belief.

That humanism's critics have never imagined this attitude inwardly, is shown by their invariable tactics. They do not get into it far enough to see objectively and from without what their own opposite notion of truth is. Mr. Joseph is possessed by some such notion; he thinks his readers to be full of it, he obeys it, works from it, but never even essays to tell us what it is. The nearest he comes to doing so is where (on p. 37) he says it is the way "we ought to think," whether we be psychologically compelled to or not.

Of course humanism agrees to this: it is only a manner of calling truth an ideal. But humanism explicates the summarising word 'ought' into a mass of pragmatic motives from the midst of which our critics think that truth itself takes flight. Truth is a name of double meaning. It stands now for an abstract something defined only as that to which our thought ought to conform; and again it stands for the concrete propositions within which we believe that conformity

already reigns—they being so many 'truths'. Humanism sees that the only conformity we ever have to deal with concretely is that between our subjects and our predicates, using these words in a very broad sense. It sees moreover that this conformity is 'validated' (to use Mr. Schiller's term) by an indefinite number of pragmatic tests that vary as the predicates and subjects vary. If an S gets superseded by an SP that gives our mind a completer sum of satisfactions, we always say, humanism points out, that we have advanced to a better position in regard to truth.

Now many of our judgments thus attained are retrospective. The S'es, so the judgment runs, were SP's already ere the fact was humanly recorded. Common sense, struck by this state of things, now rearranges the whole field; and traditional philosophy follows her example. The general requirement that predicates must conform to their subject, they translate into an ontological theory. A most previous Subject of all is substituted for the lesser subjects and conceived of as an archetypal Reality; and the conformity required of predicates in detail is reinterpreted as a relation which our whole mind, with all its subjects and predicates together, must get into with respect to this Reality. It, meanwhile, is conceived as eternal, static, and unaffected by our thinking. Conformity to a non-human Archetype like this is probably the notion of truth which my opponent shares with common sense and philosophic rationalism.

When now Humanism, fully admitting both the naturalness and the grandeur of this hypothesis, nevertheless points to its sterility, and declines to chime in with the substitution, keeping to the concrete and still lodging truth between the subjects and the predicates in detail, it provokes the outcry which we hear and which my critic echoes.

One of the commonest parts of the outcry is that humanism is subjectivistic altogether—it is supposed to labour under a necessity of 'denying trans-perceptual reality'. It is not hard to see how this misconception of humanism may have arisen; and humanistic writers, partly from not having sufficiently guarded their expressions, and partly from not having yet "got round" (in the poverty of their literature) to a full discussion of the subject, are doubtless in some degree to blame. But I fail to understand how any one with a working grasp of their principles can charge them wholesale with subjectivism. I myself have never thought of humanism as being subjectivistic farther than to this extent, that, inasmuch as it treats the thinker as being himself one portion of reality, it must also allow that *some* of the realities

that he declares for true are created by his being there. Such realities of course are either acts of his, or relations between other things and him, or relations between things, which, but for him, would never have been traced. Humanists are subjectivistic, also in this, that, unlike rationalists (who think they carry a warrant for the absolute truth of what they now believe in in their present pocket), they hold all present beliefs as subject to revision in the light of future experience. The future experience, however, may be of things outside the thinker; and that this is so the humanist may believe as freely as any other kind of empiricist philosopher.

The critics of humanism (though here I follow them but darkly) appear to object to any infusion whatever of subjectivism into truth. All must be archetypal; every truth must pre-exist to its perception. Humanism sees that an enormous quantity of truth must be written down as having pre-existed to its perception by us humans. In countless instances we find it most satisfactory to believe that, though we were always ignorant of the fact, it always *was* a fact that S was SP. But humanism separates this class of cases from those in which it is more satisfactory to believe the opposite, *e.g.* that S is ephemeral, or P a passing event, or SP created by the perceiving act. Our critics seem on the other hand, to wish to universalise the retrospective type of instance. Reality must pre-exist to every assertion for which truth is claimed. And, not content with this overuse of one particular type of judgment, our critics claim its monopoly. They appear to wish to cut off Humanism from its rights to any retrospection at all.

Humanism says that satisfactoriness is what distinguishes the true from the false. But satisfactoriness is both a subjective quality, and a present one. *Ergo* (the critics appear to reason) an object, *quâ* true, must always for humanism be both present and subjective, and a humanist's belief can never be in anything that lives outside of the belief itself or antedates it. Why so preposterous a charge should be so current, I find it hard to say. Nothing is more obvious than the fact that both the objective and the past existence of the object may be the very things about it that most seem satisfactory, and that most invite us to believe them. The past tense can figure in the humanist's world, as well of belief as of representation, quite as harmoniously as in the world of any one else.

Mr. Joseph gives a special turn to this accusation. He charges me (on p. 32) with being self-contradictory when I say that the main categories of thought were evolved in the course

of experience itself. For I use these very categories to define the course of experience by. Experience, as I talk about it, is a product of their use; and yet I take it as true anteriorly to them. This seems to Mr. Joseph to be an absurdity. I hope it does not seem such to his readers; for if experiences can suggest hypotheses at all (and they notoriously do so) I can see no absurdity whatever in the notion of a retrospective hypothesis having for its object the very train of experiences by which its own being, along with that of other things, has been brought about. If the hypothesis is 'satisfactory' we must, of course, believe it to have been true anteriorly to its formulation by ourselves. Every explanation of a present by a past seems to involve this kind of circle, which is not a vicious circle. The past is *causa existendi* of the present, which in turn is *causa cognoscendi* of the past. If the present were treated as *causa existendi* of the past, the circle might indeed be vicious.

Closely connected with this pseudo-difficulty is another one of wider scope and greater complication—more excusable therefore—which Mr. Joseph deals with (though in much too pettifogging and logic-chopping a way) on pages 33 and 34 of his article. Humanism, namely, asking how truth in point of fact is reached, and seeing that it is by ever substituting more satisfactory for less satisfactory opinions, is thereby led into a vague historic sketch of truth's development. The earliest 'opinions,' it thinks, must have been dim, unconnected 'feelings,' and only little by little did more and more orderly views of things replace them. Our own retrospective view of this whole evolution is now, let us say, the latest candidate for 'truth' as yet reached in the process. To be a satisfactory candidate, it must give some definite sort of a picture of what forces keep the process going. On the subjective side we have a fairly definite picture—sensation, association, interest, hypothesis, these account in a general way for the growth into a cosmos of the relative chaos with which the mind began.

But on the side of the object, so to call it roughly, our view is much less satisfactory. Of which of our many objects are we to believe that it truly *was* there and at work before the human mind began? Time, space, kind, number, serial order, cause, consciousness, are hard things not to objectify—even transcendental idealism leaves them standing as 'empirically real'. Substance, matter, force, fall down more easily before criticism, and secondary qualities make almost no resistance at all. Nevertheless, when we survey the field of speculation, from Scholasticism through Kantism

to Spencerism, we find an ever-recurring tendency to convert the pre-human into a merely logical object, an unknowable *ding-and-sich*, that but starts the process, or a vague *materia prima* that but receives our forms.[1]

The reasons for this are not so much logical as they are material. We can postulate an extra-mental *that* freely enough (though some idealists have denied us the privilege), but when we have done so, the *what* of it is hard to determine satisfactorily, because of the oppositions and entanglements of the variously proposed *whats* with one another and with the history of the human mind. The literature of speculative cosmology bears witness to this difficulty. Humanism suffers from it no more than any other philosophy suffers, but it makes all our cosmogonic theories so unsatisfactory that some thinkers seek relief in the denial of any primal dualism. Absolute Thought or 'pure experience' is postulated, and endowed with attributes calculated to justify the belief that it may 'run itself'. Both these truth-claiming hypotheses are non-dualistic in the old mind-and-matter sense; but the one is monistic and the other pluralistic as to the world process itself. Some humanists are non-dualists of this sort—I myself am one *und zwar* of the pluralistic brand. But doubtless dualistic humanists also exist, as well as non-dualistic ones of the monistic wing.

Mr. Joseph pins these general philosophic difficulties on humanism alone, or possibly on me alone. My article spoke vaguely of a 'most chaotic pure experience' coming first, and building up the mind. But how can two structureless things interact so as to produce a structure? my critic triumphantly asks. Of course they can't, as purely so-named entities. We must make additional hypotheses. We must beg a minimum of structure for them. The *kind* of minimum that *might* have tended to increase towards what we now find actually developed is the philosophical desideratum here. The question is that of the most materially satisfactory hypothesis. Mr. Joseph handles it by formal logic purely, as if he had no acquaintance with the logic of hypothesis at all.

Mr. Joseph again is much bewildered as to what a humanist can mean when he uses the word knowledge. He tries to convict me (on p. 36) of vaguely identifying it with any kind of good. Knowledge is a difficult thing to define briefly, and Mr. Joseph shows his own constructive

[1] Compare some elaborate articles by M. Le Roy and M. Wilbois in the *Revue de Métaphysique*, vols. viii., ix. and x.

hand here even less than in the rest of his article. I have myself put forth on several occasions a radically pragmatist account of knowledge,[1] the existence of which account my critic probably does not know of—so perhaps I had better not say anything about knowledge until he reads and attacks that. I will say, however, that whatever the relation called knowing may itself prove to consist in, I can think of no conceivable kind of *object* which may not become an object of knowledge on humanistic principles as well as on the principles of any other philosophy.[2]

I confess that I am pretty steadily hampered by the habit, on the part of humanism's critics, of assuming that they have truer ideas than mine of truth and knowledge, the nature of which I must know of and cannot need to have re-defined. I have consequently to reconstruct these ideas in order to carry on the discussion (I have *e.g.* had to do so in some parts of this article) and I thereby expose myself to charges of caricature. In one part of Mr. Joseph's attack, however, I rejoice that we are free from this embarrassment. It is an important point and covers probably a genuine difficulty, so I take it up last.

When, following Schiller and Dewey, I define the true as that which gives the maximal combination of satisfactions, and say that satisfaction is a many-dimensional term that can be realised in various ways, Mr. Joseph replies, rightly enough, that the chief satisfaction of a rational creature must always be his thought that what he believes is *true*, whether the truth brings him the satisfaction of collateral profits or not. This would seem, however, to make of truth the prior concept, and to relegate satisfaction to a secondary place.

Again, if to be satisfactory is what is meant by being true, *whose* satisfactions, and *which* of his satisfactions, are to count? Discriminations notoriously have to be made; and the upshot is that only rational candidates and intellectual satisfactions stand the test. We are thus driven to a purely theoretic notion of truth, and get out of the pragmatic atmosphere altogether. And with this Mr. Joseph leaves us —truth is truth, and there is an end of the matter. But he makes a very pretty show of convicting me of self-stultifica-

[1] Most recently in two articles, "Does 'Consciousness' Exist?" and "A World of Pure Experience," in the *Journal of Philosophy*, New York, 1st Sept., 29th Sept. and 13th Oct., 1904.

[2] For a recent attempt, effective on the whole, at squaring humanism with knowing, I may refer to Prof. Woodbridge's very able address at the Saint Louis Congress, "The Field of Logic," printed in *Science*, N.Y., 4th November, 1904.

tion in according to our purely theoretic satisfactions any place in the humanistic scheme. They crowd the collateral satisfactions out of house and home, he thinks, and pragmatism has to go into bankruptcy if she recognises them at all.

There is no room for disagreement about the facts here; but the destructive force of the reasoning disappears as soon as we talk concretely instead of abstractly, and ask, in our quality of good pragmatists, just what the famous theoretic needs are known as and in what the intellectual satisfactions consist. Mr. Joseph, faithful to the habits of his party, makes no attempt at characterising them, but assumes that their nature is self-evident to all.

Are they not all mere matters of *consistency*—and emphatically *not* of consistency between an Absolute Reality and the mind's copies of it, but of actually felt consistency among judgments, objects, and manners of reacting, in the mind? And are not both our need of such consistency and our pleasure in it conceivable as outcomes of the natural fact that we are beings that develop mental *habits*—habit itself proving adaptively beneficial in an environment where the same objects, or the same kinds of objects, recur and follow 'law'? If this were so, what would have come first would have been the collateral profits of habit, and the theoretic life would have grown up in aid of these. In point of fact, this seems to have been the probable case. At life's origin, any present perception may have been 'true'—if such a word could then be applicable. Later, when reactions became organised, the reactions became 'true' whenever expectation was fulfilled by them. Otherwise they were 'false' or 'mistaken' reactions. But the same class of objects needs the same kind of reaction, so the impulse to react consistently must gradually have been established, with a disappointment felt whenever the results frustrated expectation. Here is a perfectly plausible germ for all our higher consistencies. Nowadays, if an object claims from us a reaction of the kind habitually accorded only to the opposite class of objects, our mental machinery refuses to run smoothly. The situation is intellectually unsatisfactory. To gain relief we seek either to preserve the reaction by re-interpreting the object, or, leaving the object as it is, we react in a way contrary to the way claimed of us. Neither solution is easy. Such a situation might be that of Mr. Joseph, with me claiming assent to humanism from him. He cannot apperceive it so as to permit him to gratify my claim; but there is enough appeal in the claim to induce him to write a whole article in justification of his refusal. If he

should assent to humanism, on the other hand, that would drag after it an unwelcome, yea incredible, alteration of his previous mental beliefs. Whichever alternative he might adopt, however, a new equilibrium of intellectual consistency would in the end be reached. He would feel, whichever way he decided, that he was now thinking truly. But if, with his old habits unaltered, he should simply add to them the new one of advocating humanism quietly or noisily, his mind would be rent into two systems, each of which would accuse the other of falsehood. The resultant situation, being profoundly unsatisfactory, would also be instable.

Theoretic truth is thus no relation between our mind and archetypal reality. It falls *within* the mind, being the accord of some of its processes and objects with other processes and objects—'accord' consisting here in well-definable relations. So long as the satisfaction of feeling such an accord is denied us, whatever collateral profits may seem to inure from what we believe in are but as dust in the balance—provided always that we are highly organised intellectually, which the majority of us are not. The amount of accord which satisfies most men and women is merely the absence of violent clash between their usual thoughts and statements and the limited sphere of sense-perceptions in which their lives are cast. The theoretic truth that most of us think we 'ought' to attain to is thus the possession of a set of predicates that do not contradict their subjects. We preserve it as often as not by leaving other predicates and subjects out.

In some men theory is a passion, just as music is in others. The form of inner consistency is pursued far beyond the line at which collateral profits stop. Such men systematise and classify and schematise and make synoptical tables and invent ideal objects for the pure love of unifying. Too often the results, glowing with 'truth' for the inventors, seem pathetically personal and artificial to bystanders. Which is as much as to say that the purely theoretic criterion of truth can leave us in the lurch as easily as any other criterion.

I think that if Mr. Joseph will but consider all these things a little more concretely, he may find that the humanistic scheme and the notion of theoretic truth fall into line consistently enough to yield him also intellectual satisfaction.

IV.—ON ANALOGY AND ITS PHILOSOPHICAL IMPORTANCE.[1]

By Harald Höffding.

I.

If we observe the tendency which in these later years manifests itself in the discussions on the first principles of science, we find that the evidence of the validity of these principles more and more is found in their applicability. The right to set up a principle is founded on the fact that it leads us to a connexion between phenomena which otherwise would be obscure and sporadic. The truth of principles, then, does not consist in their conformity to an absolute order of things :—an order of things we do not know before we—with the help of these principles—have found a connexion between the phenomena. We ourselves produce the truth, when we find the principles, which can connect phenomena in greatest extension and in highest degree. A critical or dynamical concept of truth is making its way, in opposition to the dogmatic concept of truth which can be designated as static, because it supposes a given quiescent order of things which then is to be reproduced in thought. This is nothing new for the philosopher. The critical philosophy, already, postulated a dynamical concept of truth, when it pointed out that objective validity consists in the lawful connexion of phenomena. But it is of no small importance, that not only philosophers but also scientists as Clerk Maxwell, Ernst Mach and Heinrich Hertz, go in this direction. Not only Dogmatism, but also Scepticism is opposed by this view ; Scepticism is constituted by presupposing the dogmatic and static concept of truth and then showing that this concept is illusory.

The setting up of principles is, then, a way to the realisation of an ideal aim, which is to find the greatest possible

[1] This paper was read before the Jowett-Society in Oxford, 26th November, 1904.

connexion between the greatest possible number of phenomena. It is not necessary that principles have other qualities than those which are required to the obtaining of this aim. It is not necessary that they contain an absolute reproduction of the innermost essence of Existence. Their aim is to make an order of phenomena possible, and this they can do, even if they contain figurative expressions, if only the inner connexion of the images, which are used, is such that the connexion of phenomena can be expressed and foretold by it. Truth requires, then, no relation of identity, but only a relation of analogy between principles (ideas, axioms) and phenomena (perceptions, experiences). Analogy is likeness of the relations of different objects, not likeness of single qualities. The critical or dynamical concept of truth is then also a symbolic concept. It requires a system of images or signs which make it possible for us to read the relations of phenomena and to be led to new phenomena. We consider the events which experience presents to us, as if they only were alterations of our images. Naturally, the most simple and clear series of images which can fulfil this task is to be preferred. We come so to the principle of simplicity, which was applied so confidently by the thinkers of the Renaissance, or to what in our time has been called the thinking of the world after the principle of least measure of force.

That we have no right to ascribe more than symbolic validity to our knowledge is, then, in the first place, a necessary consequence of the principle, that we have no right to ascribe qualities to it, which are no conditions for reaching its end. If analogy is sufficient for this end we have no right to suppose an identity which cannot be proved. The possibility is never excluded, that other principles than ours could solve the same problems. The transition from reason to consequence is always more sure than the inverse, because different premisses may lead to the same conclusion. An end may be reached in different ways, and it can never be proved that science has found the absolutely only way to order and connexion in the world of experience.

But also from other reasons it follows that our knowledge is symbolic.

We cannot think without images. What we call thinking in a special and strict sense, the activity by which the relation between different images is pointed out as clearly and unequivocally as possible. Every thought, be it as abstract and sublime as it may be, supposes images whose reciprocal relations it expresses. The image may be full and concrete, or it may be a mere scheme or sign. Not only in

our own private thinking, but also, and especially, when we represent our thoughts to others, we proceed in this manner. We think in examples, though we often reduce these examples to simple schemes; and quite evident it is, that we make use of examples and signs, when our thoughts are to be communicated to others.

Our thinking is always an interpretation of a given material. It is activity on the foundation of receptivity. It is true, the contrast of activity and receptivity is not absolute; what from one point of view and on one stage is passive, may from another point of view and in relation to a lower stage be active. But in every single case, in every single act our thinking transforms something given to a new form, and we cannot prove that this work of transformation is of only formal importance, so that the elements of thought and the elements of that which is given should be qualitatively identical. We have no right to suppose that the elements we distinguish in order to explain that which is given, also exist as absolute parts of things. It is sufficient for the validity of thought, that the relations between the elements of thought agree with the relations of the phenomena.

Not only do we in our thinking transform what is given in order to explain it, but our thinking consists in a comparison of different domains of experience, so that the one can make the other clearer for us. All our knowledge, the spontaneous as well as the scientific, is therefore full of analogies. When thinking proceeds to a new task, it does not take up quite new means and ways, but it tries so far as possible to make use of those which it has already applied, especially if they are clear and plain. Language has not produced peculiar expressions for mental phenomena, but has transferred the expressions which originally were made for material phenomena. As there are important differences between the domains of experience, the facts not being homogeneous but constituting many groups, every one with its peculiarities, our thinking must enlighten one group or domain by the means of another, especially so, that the experiences which arrange themselves for thought in the simplest and most fertile way, are made use of for the understanding of the other. This would not be necessary, if existence did not manifest qualitative differences. But the parts of existence, as they are known through experience, are not homogeneous, and analogy is therefore a necessary way to understanding.

I shall now try to elucidate the character and importance of analogy in the different domains of thought.

II.

Every formation of a general concept proceeds through analogy. The elements of the concept (*e.g.*, colour, size and form as elements of the concept of horse) vary in the different phenomena to which it shall correspond, and the concept is therefore only possible, if the relation of the qualities is alike, though every one of them be different. The brown colour has, *e.g.*, the same relation to one horse, as the red colour has to another horse. Human qualities vary from man to man, but there is a certain constant relation between them, and without this a general concept would here be impossible. We can form no concept whose elements identically can be found in all the single phenomena. The concept is formed through a steady transition from example to example in virtue of analogy.

This has a peculiar interest, because analogy from the time of Aristotle has been supposed to stand in opposition to concept. To Aristotle analogy was a tie between different domains which could not be brought under one concept. Analogy begins, where concepts can no more be formed, and relationship by analogy is no conceptual relationship. But this opposition is not true, if the formation of concepts itself presupposes analogy. Instead of this opposition is to be set the opposition between different degrees and sorts of analogy.

In the formation of concepts several examples are compared, and there is made a transition from one example to another, so that the simplest and clearest example is adhered to (perhaps only in schematical form, *i.e.*, with elimination of all unnecessary elements) and is made use of to elucidate the others.

In the formation of principles or axioms the use of analogy is still more evident.

In its strictest form analogy is quantitative and is then designated by its Latin name: proposition. The relation between two numbers can be the same as the relation between two other numbers, though all four numbers are different. In such cases one of the elements can always be found with the help of the others. Quantitative analogy is constructive, and the relation between the different pairs of elements is a relation of identity. The relation between 3 and 6 is identically the same as the relation between 4 and 8, and this relation can itself be expressed in a single term: 2. In this point quantitative analogy differs from qualitative analogy, and its importance for our knowledge has its reason

in this. It determines the unknown through the known relation between it and something known without consulting experience. When relations of number can be pointed out it is possible through them to read the course of events and the place of elements in the world of experience. But this applicability depends itself on an analogy : an analogy between the place of numbers in the numerical series and the place of events in the temporal series or of elements in the spatial series. The numerical series is the simplest and most exact order we can form, and it is natural that all other orders and series be brought in the most intimate connexion with it. This analogy was first pointed out by Maxwell and Cournot.

Movements in space are the events which can most exactly be measured, *i.e.*, numerically determined, and it is quite explicable why Natural Science since the days of the Renaissance has sought to conceive all events in Nature as movements. Qualitative differences and alterations are regarded as merely subjective ; sometimes it is said that they are mere appearances. But it is sufficient to suppose an analogy between quantities and qualities so that qualitative relations can be determined and foretold by quantitative relations. Science, then, conceives qualitative alterations as if they were only quantitative, and the alterations are thought as going on in something which only presents quantitative differences. In this way such concepts as matter, atom, ether, are produced. They are images or schemes which can be wholly determined by numbers,—which can be applied consequently,—and which can lead to secure conclusions concerning new experiences. This analogy has shown itself so fertile and important, that it has been regarded as an identity, or at least as the only possible analogy.

Still more fundamental than the numerical relation is the logical relation of reason and consequence. It is at work in all operations of thought, be the object of this operation qualitative or quantitative. This is the most intimate connexion which can exist between our thoughts. It is natural, therefore, that we as far as possible seek to assimilate all our experiences, all relations between events to this relation between our thoughts. We try to construct such a view of the relation between the events, that the one event is in the same relation to the other as reason to consequence. We arrange them in series of such a character that the preceding link can lead to the understanding of the following, perhaps to predetermine it. But as the relation between reason and consequence is a purely logical relation, while the relation between events is a temporal relation,—and as the series of

thoughts is a work of our activity, while the series of events is not produced by us,—it is only through analogy that we apply the principle of reason to events. This was the cardinal thought in Kant's theory on the analogies of experience, which maintained the importance of logical principles for real research, but at the same time made an end to the dogmatic identification of reason and cause, which earlier systems had taught. Later on Wundt has maintained a similar view, while Hegel has made a romantic attempt to substitute identity for analogy. But not even they who nowadays ascribe most importance to Hegel's system, will say that he has been successful here. The laws of thought may enable us to find our way through the world of experience ; but from this we have no right to conclude that existence is estimated or in its fulness expressed in the laws of thought.

The numerical series, movement, and the relation of reason and consequence are great examples of the scientific importance of analogy, which already manifests itself in the formation of the single concepts. More special examples may be found in the single sciences. The idea of undulation has, *e.g.*, been transferred from one physical domain to the other in virtue of analogy. Sometimes it is not known what it is which undulates ; it is only known that an undulation is going on, as with the so-called " ether ". The importance of analogy in Biology — different organs exercising a like function of life — Aristotle has already pointed out. In Sociology there has been an endeavour to get a leading principle, a fundamental scheme in the analogy between society and organism. Eminent authors have tried to build upon this analogy, but they have not been able to make the image of organism a consistent and fertile scheme for sociological research. In the first place, society is a connexion of organisms, and the relations within one organism cannot be transferred to a whole group of organisms. And then, while in the organism the functions of some elements are connected with consciousness, in society all parts are conscious, and must, therefore, be considered as ends in a manner, in which this cannot be said on the parts of the organism. But even the eagerness with which sociologists have sought an analogy which could serve as a principle, testifies to the scientific importance of analogy. And this example shows what conditions scientific analogies must satisfy. They must not only fit on single points, but on all points, so that full consequences may be drawn from them and be applied in the explanation or details. The symbol or the image must serve us as a scheme which

we may follow accurately in the special cases, and which can lead us to new experiences. It is the good fortune of Natural Science that it has such a scheme in mechanical movement. This scheme has now in three centuries led forward to new problems and new discoveries. When speculative philosophy and religious thinking have not led to such results the reason must be that they cannot transform their symbols to accurate and fertile schemes.[1] And the reason of this, again, is that they do not, as the special sciences, try to elucidate one part of existence by another part, but to elucidate existence considered as a whole through a single part of it. This point I will try to make clearer.

III.

If speculative or metaphysical thought is to have any scientific value, its task must be to develop a view of the world as a whole, a theory of existence in its inner ground, on the foundation of empirical evidence. But the world or existence is never given as a whole, and cannot be thought as given so for any mind. The question must then be, whether any of the concepts which are won from special experience, can be adapted to serve as an expression for existence considered as a totality. These concepts are all founded on the ground of special experiences; every one of them expresses only a part or a side of existence. Can then existence as a whole be understood and interpreted by means of any single part or any single side? It is here not, as in the special problems, one part of existence which is to be understood by means of other parts; but it is the whole which is to be understood by means of a part. The problem of knowledge is here sharpened.

When we go from one domain of experience to another, it is possible to indicate the changes which the concepts must undergo in order to be transformed from the one domain to the other. But the change which a concept is to undergo, where it shall be transferred from a part to the whole, must be much more important than when the transition is from part to part. The question is, if a transition after all is possible, the whole may underlie quite other laws than any

[1] In a larger sense also the schemes and the numerical signs are symbols. In this sense the word symbol is used by Leibniz, when he opposes symbolic knowledge to intuitive knowledge (*Meditationes de cognitione*, 1684). I follow Kant (*Kritik der Urtheilskraft*, § 59) in his distinction between symbol and scheme: the first is a concrete image, the second an abstract sign, where only the elements which are necessary for the purpose are retained.

part in it. And the whole may have sides or parts which do not at all express themselves in our experience. Perhaps we know only some of the elements of which existence considered as a whole is composed. At all events, it is here impossible to verify the use of analogy, because the whole is never given. It is then no wonder that our thought cannot on this point come to any definite conclusion. Neither matter nor spirit, neither multiplicity nor unity, neither being nor becoming, are fit to be ultimate expressions of existence. And yet there is a continual want in the human mind to reach what is deepest, to apply its principal thoughts as expressions of existence considered as a totality. This want can scarcely die; but it ought to be connected with the critical consciousness that we always work here with analogies which cannot be carried out, with symbols which cannot be developed to scientific schemes.

Among the hypotheses which here may be maintained, philosophical Idealism is of peculiar importance. It appears in two forms, which I will distinguish as the speculative and the metaphysical Idealism.

The speculative Idealism will not acknowledge that it works by means of analogy. This form of Idealism regards it as a necessity that all which exists, all which has reality, must be at once unity and multiplicity. The greater fulness and the closer unity, the higher a degree of reality we ought to acknowledge. In this standard the very nature of the Absolute manifests itself. Hegel's System is a great example of this view, which in our days has been developed by Francis Herbert Bradley in an important and profound work. I have two things to remark on this view. First.—It is not properly a system, but a standard, an ideal which is given in Mr. Bradley's work. Hegel had a system, but Mr. Bradley has only a standard, and he reminds us more of Kant than of Hegel. Hegel's identification of standard and system is a consequence of his identification of identity and analogy, and a correction of the one of these points must lead to a correction of the other. Secondly.—This standard or ideal is taken from the human mind. In our mind we at every moment find a given multiple content which is to a certain degree combined into unity, and we ascribe to mental life a higher degree of development, the richer the content is without detriment to unity and concentration. It is this standard which speculative idealism transfers from mental life to existence as a whole. This transition is founded on analogy. We suppose that we have right to apply to all existence what is true for that part of it which we immediately know. *The*

metaphysical Idealism acknowledges from the first beginning that it is founded on analogy. Its most eminent representatives are Leibniz and Lotze. Leibniz has for the first time with clearness and energy maintained that the idealistic conception of the world is founded on analogy. The question is then here, if it is necessary to make use of this analogy. Metaphysical Idealism will compel us to choose between Idealism (or Spiritualism), which conceives matter in analogy with mind, and Materialism, which conceives mind in analogy with matter. It is true that our experience does not show us more forms of existence than these two. But their opposition cannot be shown to be contradictory. It is quite possible that the difference is only contrary and that existence—as Spinoza thought—has many more fundamental forms (or attributes) than the two which appear in our experience. On this ground alone the question must remain open, even if we do not accentuate the difficulties of the transference of a concept from a part to the whole.

Metaphysical Idealism has a superiority in the clear consciousness of analogy as the foundation. But speculative Idealism in the form which Mr. Bradley has given it, is distinguished by its standard of reality and by that method of research which this standard leads to. The scientific importance of this idealism is, that it leads us to try to widen our experience and to unify our old and our new experiences in the highest possible degree. An analytical and a synthetical work in continual interaction is so called for, because the connexion of multiplicity and unity is our very standard of reality. And the practical or ethical importance of this Idealism corresponds to the theoretical: it claims at once the extension and the concentration of life. But a systematic totality is still an ideal, and it is only an illusion, when the standard is regarded as a system, or as a guarantee for an absolute system.

I have here only discussed the possibility of a Metaphysics from the real point of view. I have asked if it is possible to find predicates for the world considered as a whole. New difficulties would arise from a formal point of view, through the question, if it is possible at all to think the world as an absolute totality. Also from this point of view the importance of analogy would appear: the concept of a whole is only known from special experiences of the relation of parts to their limited wholes, and the concept of " world " is formed by generalising this concept and applying it in another domain than the original.

Metaphysics is perhaps rather an art than a science. It is

the task of Philosophy to give us a standard to be used in the criticism of the spontaneously developed world-views. In Philosophy, as in Science, the value and importance of principles consist in their power to lead our thought in its work, to conduct to new tasks and new views.

IV.

Religion also works in the sphere of ideas by means of analogy. Religion also maintains a view of totality. But while Metaphysics is guided by the intellectual interest of finding an ultimate idea and leaves it to the consequence of thought and experience, what the content of this idea is to be, the main interest of Religion is the fate of the great life-values (whatsoever they may be) in the great struggle of existence. Religion is guided by the experience, that values arise and values perish, and the religious problem consists in the question, if it is possible to maintain a continuity in spite of this perpetual change and in spite of the limits of our knowledge. The religious consciousness is, where it is original and living, always occupied with seeking a satisfying expression for experiences of the fate of values. It maintains that a great order of things manifests itself in the world of values, of qualities of feeling, as well as in the world of sense-qualities, and it seeks to express this conviction in definite ideas. Values do not stand for the religious consciousness as sporadic flashes, as accidental products in the great process of existence. But it discovers in the course of its development, that what persists cannot be the single, empirical values; their time can end, and yet—that is the faith of Religion—the kingdom of values is persisting. But a hard struggle is going on before this discovery is made. Only reluctantly men give up the supposition, that their immediate experiences are fit to express an absolute reality. The religious consciousness should be glad, if it could escape by acknowledging that all its ideas are symbolic. Dogmatism has here its proper seat, but its general character is the same as in the scientific domain.

Religion is, as well as Metaphysics, obliged to express that which should be an absolute whole by means of ideas which originate from a single part or side of the whole. Its difficulties are in this respect the same as those of Metaphysics. But the struggle between thought and image is more vehement here than in Metaphysics. The metaphysician works to transform the image or the symbol to a scientific scheme. This interest is not the main one in Religion. Here, what

are wanted, are great and mighty images, which express the emotion of the life-struggle and nourish hope and courage. The possibility of consistent appliance of the images has only secondary interest, and it is frequently only criticism from outside which investigates it. If the image only expresses an essential point of the life-experience, it is maintained, and the inconsequences are kept away through exclusion of comparison.

The future of the religious problem depends on the possibility of maintaining the conviction of the continuity of values with progressing experience, and in spite of the clear acknowledgment of the symbolic character of all ideas, in which this conviction expresses itself. But however this future may turn out, the religious problem is seen to present an analogy to the other problems of the human mind. The religious conviction of the persistence of value can only be maintained through a perpetual endeavour to discover and to produce values in the world of experience. In Religion, as in Science and Philosophy, the essential is not the single images or symbols, but the use which is made of them, the work which they inspire.

V.—MR. BRADLEY'S "ABSOLUTE CRITERION".

By Howard V. Knox.

The intention of the present paper, on its critical side, is to traverse Mr. Bradley's contention[1] that in the principle "Ultimate reality is such that it does not contradict itself" we have an "absolute criterion" for distinguishing appearance from reality. I hope to show that the principle of contradiction, so understood, is self-contradictory. I wish definitely to disclaim, at the outset, any sinister design of ruining the principle of contradiction, as such, by a *reductio ad absurdum*. Rather, my aim is to save the principle from its friends. The positive aim, that is, of the paper is to contribute towards a better interpretation of the principle than that which pervades the writings of those whose loudly proclaimed devotion thereto takes the shape of treating it as a Moloch, to be propitiated only by the sacrifice of every human interest. For if a *reductio ad absurdum* of the principle of contradiction is to be found anywhere, it is in the pages of *Appearance and Reality;* and it is my ambition to vindicate the principle from the charge of necessarily conducting to a complete *débâcle* of the intellect.

I.

Before proceeding to a direct examination of Mr. Bradley's fundamental thesis, we will, however, take such an example of the results at which he arrives, as will justify this last assertion. A single example will, I think, be more than enough.

In Chapter II., entitled "Substantive and Adjective," Mr. Bradley maintains that the relation between a thing and its qualities is unintelligible. The reason he gives is that "If you predicate what is different, you ascribe to the subject what it is *not;* and if you predicate what is *not* different, you say nothing at all".[2] It does not require a writer of

[1] *Appearance and Reality*, p. 136. [2] *Ibid.*, p. 20.

Mr. Bradley's ingenuity to prove that, once this position is admitted, we cannot escape from this "old dilemma" by substituting one kind of predicate for another. The objection is, of course, as he maintains, equally applicable to every predication whatsoever. Mr. Bradley's position, then, is that the distinction of substantive and adjective, as he calls it, is untenable *because* "S is P" is fundamentally self-contradictory. At the same time he admits that "S is S" does not represent a judgment at all. Thus, in Mr. Bradley's view, every real judgment, irrespective of the actual nature of its content, constitutes a violation of the principle of contradiction.

After further developing this view in the succeeding chapter, Mr. Bradley somewhat naïvely remarks that "The reader who has followed and has grasped the principle of this chapter, will have little need to spend his time upon those which succeed it. He will have seen that our experience, where relational, is not true; and he will have condemned, almost without a hearing, the great mass of phenomena."[1] It would indeed be waste of time—if time were real—further to follow Mr. Bradley in his devastating progress through "the great mass of phenomena". If everything that can be said about anything is fundamentally unintelligible, it is transparently clear that we can never open our mouth without logically stultifying ourselves. Unfortunately, Mr. Bradley's reason for "condemning the great mass of phenomena" applies equally to everything he himself says about either appearance or reality. Nay, more. If in deference to the principle of contradiction every real judgment is to be "condemned," then *either* the principle of contradiction itself is not really a judgment, *or* we shall best execute its behests by consigning it also to perdition. Or we may put it thus. If in telling us that "Ultimate reality is such that it does not contradict itself," Mr. Bradley is, as he claims, supplying us with "positive news about absolute reality,"[2] then for that very reason, according to his own principles, he is ascribing to reality "what it is *not*".[3]

But let us envisage Mr. Bradley's contention from a slightly different point of view, in the hope that patience and sympathy may haply even yet win a way to some hidden depth of meaning. Mr. Bradley asserts that "S is P" is a self-contradiction. Quite obviously, this assertion itself, in order to be true, must be self-contradictory; so that, on the supposition that the assertion has a meaning, self-contradiction will here

[1] *Appearance and Reality*, p. 34. [2] *Ibid.*, p. 140. [3] *Ibid.*, p. 20.

be a condition of truth, and not of falsity. Further, to admit that a tautology is not a judgment, is to admit that *only* an assertion of the type " S is P " can have meaning. So that a contradiction of this kind is in fact the necessary condition of meaning in all propositions. The natural conclusion to draw would seem to be that *this kind* of self-contradiction—if we still insist on calling it self-contradiction—is not a defect, but a merit, in any proposition. And surely it should not be necessary to point out that the *condemnation* of any particular assertion as self-contradictory involves a distinction between assertions that are subject to the condemnation and those that are not? To break down the distinction—to represent self-contradiction in the expression of belief as wholly unavoidable—is to represent the demand for consistency of statement as something profoundly irrational. We find, however, that Mr. Bradley prefers not to admit any distinction between harmful and beneficial self-contradiction. Such a distinction he apparently regards as a mere practical makeshift, which theory cannot tolerate.[1] He prefers to adopt the course—which, whatever we may think of it, certainly cannot be accused of being a practical makeshift—of cutting off the branch on which he sits. That is, he not only asserts that ' S is P ' is a self-contradiction ; but he also insists on so interpreting self-contradiction that this assertion, in order to be true, must at the same time be absolutely false. It is to be hoped that our failure to accept the principle of contradiction when so applied, will not be taken as evincing any disrespect for the principle in the abstract.

We may, however, I think, admit that if Mr. Bradley's view is sound, absolute idealism does indeed represent the last word of philosophy ; for henceforth the only possible philosophy will be a philosophy without words, as without deeds. Mr. Bradley has, in fact, shown that a consistent absolute idealism must be speechless. But this consummation, however admirable in theory, is in practice marred by the fact that the absolute idealist is not consistent.

II.

We have seen the result of identifying (1) the conception of self-contradiction as an absolute criterion for the detection of error, with (2) the conception of self-contradiction as an

[1] " The conclusion to which I am brought is that a relational way of thought—any one that moves by the machinery of terms and relations—must give appearance, and not truth. It is a makeshift, a device, a mere practical compromise, most necessary, but in the end most indefensible " (*Appearance and Reality*, p. 33).

absolutely indispensable ingredient of all significant assertion. We may now go on to examine the claims of conception (1), judging it as far as possible on its own merits.

Before reaching that part of his book which ostensibly deals with "Reality," Mr. Bradley does not put forward any definite statement of the principle on the validity of which, as he subsequently says (pp. 136-37), his whole argument rests. We shall not be doing him any injustice therefore, if, in the first instance, we regard his constant appeal in Part I. ("Appearance") as made to the principle in the form "A cannot be both B and not-B".

Now in any alleged instance of self-contradiction in the "appearance" A, the contradiction must be either (1) merely apparent or (2) real. If (1), there is no room for the application of the principle of contradiction. If A's internal conflict is only apparent and not real, there is no ground for condemning A itself as appearance. To apply the principle, therefore, we must assume (2).

To avoid needless complications, we may abstain from pressing the objection that the mere possibility of mistaking an apparent for a real contradiction is an insuperable obstacle to regarding the principle as an "absolute criterion". Even an "absolute truth" can only be an absolute *criterion*, on condition of never actually leading us into error; so that any possibility of faulty application is incompatible with the claim of the criterion to be absolute.[1] Mr. Bradley, however, is untroubled by such doubts. He has no hesitation in assuming, in every case, that the contradiction is real and not apparent. And from his own point of view he is right. For has he not demonstrated in Chapters II. and III. that "a relational way of thought" is *necessarily* self-contradictory? Thenceforth for him there is no need to discriminate between real and apparent inconsistency: for him one proposition must be as unintelligible as another.

But to resume. In order to condemn the "appearance" A as self-contradictory, we must take it as proved that, rightly viewed, it *really is* both B and not-B; since otherwise the contradiction is apparent and not real. On the other hand, the only reason that is adduced for denying the reality of A under these circumstances is that, according to the principle

[1] There is the less need for dwelling on this point, as it has been well worked out already by Mr. Alfred Sidgwick in his article on "Applied Axioms" in MIND, N.S., No. 53. I may, however, take this opportunity of pointing out that the whole of the present paper is in keeping with Mr. Sidgwick's contention, that *no* truth can be at once undeniable and applicable.

of contradiction, it *cannot be* both B and not-B. The reality of A is denied on the ground that it cannot be that which, by the very terms of the impeachment, it really is. Thus every attempt to utilise our principle as a criterion involves a denial of its claim to be true absolutely and without qualification. Unless something can be, and is, self-contradictory, there is nothing for us to condemn on the score of self-contradiction. This, then, is the position to which we are reduced: If self-contradiction is possible, the principle is false; and if self-contradiction is impossible, the principle has no possible application. That is to say, the claim of our "criterion" to be at once absolute and applicable is self-destructive.

"But," it will be objected, "all that you have really proved is that in the statement 'A cannot be both B and not-B' A is not to be taken unconditionally. The principle should run 'A, if real, cannot be both B and not-B'; which is equivalent to saying that 'Only appearance can be self-contradictory'. And this accords with Mr. Bradley's own statement of the principle, namely, 'Ultimate reality is such that it does not contradict itself; here is an absolute criterion'."

Well, it is something to have gained the admission that the principle of contradiction requires qualification before it can be made applicable. For now there may be greater readiness to regard it as open to question whether the proposed qualification is the one really required. To this question, then, we will now address ourselves. I think it will be found that, in point of fact, the proposed limitation is a step entirely in the wrong direction.

Restricting ourselves, in the first instance, to Mr. Bradley's plane of thought, we straightway encounter the difficulty that if any alleged contradiction in the "appearance" A is real, then A, as owning that contradiction, must itself partake of reality. It seems strange, does it not, to deny A's reality precisely by reason of some real feature which it is supposed to present? To put the difficulty in a more general way. If reality cannot be self-contradictory, then all self-contradiction must be merely apparent; and conversely, if self-contradiction is real, then the real is so far self-contradictory. We are therefore confronted by the following dilemma: If the contradiction in A is merely apparent, then our "absolute criterion" is not applicable; and if the contradiction is real, then A is so far, not mere appearance, but reality. Here again, then, we see that the attempt to apply our "absolute criterion" is self-destructive.

And the situation becomes, if possible, still worse when we

inquire into the *grounds* of this amazing criterion. On this point there can be no possibility of mistake as to Mr. Bradley's meaning. He says: "For consider: you can scarcely propose to be quite passive when presented with statements about reality. You can hardly take the position of admitting any and every nonsense to be truth, truth absolute and entire, at least so far as you know. For, if you think at all so as to discriminate between truth and falsehood, you will find that you cannot accept open self-contradiction. . . . It [*i.e.*, the "absolute criterion"] is proved absolute by the fact that, either in endeavouring to deny it, or even in attempting to doubt it, we tacitly assume its validity."[1] That is to say, reality cannot be self-contradictory, *because* a self-contradiction is not a possible object of belief. Contradiction is impossible in reality because it is impossible in thought. In other words, the final rendering of the principle of contradiction is "A cannot be *conceived* as both B and not-B".

But this rendering is only verbally different from our original principle, as is evident from the fact that our original dilemma reappears in the following shape: If self-contradictory belief is possible, the principle is false; and if self-contradictory belief is impossible, the principle has no possible application. And, obviously, so far as it is true that A cannot be *conceived as* both B and not-B, so far is it true, and true without any sort of qualification, that A cannot *be* both B and not-B.

Mr. Bradley's argument, therefore, defeats itself. Clearly, for the special purpose of the "absolute criterion" it is needful to show, not so much that reality cannot, as that appearance *can*—and, indeed, must—be self-contradictory. Or our difficulty may be more fully stated thus. Our readiness to accept as axiomatic the dictum, that "Ultimate reality is such that it does not contradict itself," entirely depends upon whether or not that dictum is taken as equivalent to the assertion that *only* 'ultimate' reality can escape self-contradiction. At the same time, without assuming that equivalence, the dictum obviously cannot pose as an absolute criterion for distinguishing appearance from reality. And it is precisely in respect of this crucial point that Mr. Bradley's argument appears so singularly defective: the impossibility of self-contradiction in the abstract is doubtless a valid reason for denying the possibility of self-contradiction in reality, but does not by itself seem a valid reason for assuming the possibility of self-contradiction in any concrete form whatever.

[1] *Op. cit.*, pp. 136-137.

Or can it be that Mr. Bradley holds *experience* to be a sufficient guarantee for the reality of self-contradiction—though not for that of anything else? Is he prepared to maintain that because self-contradiction is impossible in reality, therefore experience is powerless to establish the reality of that which appears to be self-contradictory; but nevertheless suffices to establish the reality of the self-contradiction? However that may be, what we are entitled to demand is a reasoned justification of the strange theory that the principle of contradiction *does not apply to appearance;* and all that we get is the assurance that a self-contradiction must be absolutely unthinkable. In other words, Mr. Bradley's exclusion of appearance from the proper scope of the principle of contradiction is purely arbitrary: it stands, not for a qualification, but for a denial, of the principle of contradiction.[1]

In the foregoing review of the relation between Mr. Bradley's criterion and the grounds actually adduced in its support, I have been content to lay stress on the arbitrary character of the transition from the impossibility of self-contradiction in reality to the necessity of self-contradiction in appearance. I am not concerned to deny that 'arbitrary' is a somewhat colourless epithet with which to describe so violent a transition as that from the affirmation to the negation of the principle of contradiction: I simply wish to emphasise its sufficiency in regard to the pretensions of the "absolute criterion". For unless these two statements, "Ultimate reality is such that it does not contradict itself," and "Appearance is essentially self-contradictory"—unless these can be shown to set forth diverse aspects of one and the same principle, the "criterion" abruptly fades into the inane. It seems clear that nothing less heroic than the absorption of the principle of contradiction in some higher synthesis could possibly meet the requirements of the case. But even this consideration—though, to our human limitations, it might seem fairly decisive—when taken barely as it

[1] We are therefore justified in saying that, under the most favourable interpretation, Mr. Bradley's theory of the Universe amounts simply to this. The principle of contradiction is unassailable on grounds of pure reason, *but*—this whole world in which we live and move and have our appearance forms one vast, rigid and unintelligible exception thereto. It is quite in accordance with the fitness of things that the author of such a scheme should profess abhorrence and contempt for every form of scepticism. And yet a rule, which, so far as our positive knowledge extends, consists entirely of exceptions, seems to afford a somewhat insecure basis on which to rest dogmatic statements about the nature of ultimate reality.

stands is no adequate measure of the futility of the "absolute criterion". The resistless self-disruptive tendency of the "absolute criterion" resides in the fact that, in basing the impossibility of self-contradiction in reality, as opposed to appearance, on the impossibility of self-contradiction in thought, *it thereby represents* [*false*] *appearance as antithetical at once to thought and to reality.*

Now, whether we assert or deny the ultimate identity of thought and reality, it remains true that *if* any being is wholly distinct from thought, then such distinctness constitutes an indefeasible title to reality. To "identify" thought and reality is merely to treat the possibility in question as wholly meaningless. If, therefore, a given "appearance" actually *is* independent of thought to the extent of refusing to be bound by the laws thereof, we cannot do otherwise than acquiesce in its masterful reality. That is to say, a self-contradictory appearance, if such a thing were possible, would *ipso facto* be reality in the shape of the thing-in-itself: and the fact that to be at once an appearance and a thing-in-itself is to be a contradiction, would but enhance its reality. Indeed, its title to reality would be twofold: firstly, on the ground that the contradiction itself is taken to be a real feature in the "appearance"; and secondly, on the ground that *nothing but* reality could so triumphantly defy the laws of thought.

We see, then, that to oppose appearance to thought is to identify it with reality. And the complement of this, namely that to oppose appearance to reality is to identify it with thought, is perhaps even more obviously true. What possible account, indeed, can be given of false appearance, except that it is an appearance which has been wrongly interpreted? And where there is interpretation, there thought has been at work. Contrariwise, an appearance, taken for what it is, is simply fact. As Mr. Bradley himself is fain to admit, when arguing against the thing-in-itself, "What appears, for that sole reason, indubitably *is*; and there is no possibility of conjuring its being away from it".[1] Thus appearance can be contrasted with reality, only according as it is assimilated to thought. Whence it follows that if we deny anything of reality *on the ground that it is impossible to think it*, we must, *à fortiori*, deny it of appearance. We must, in fact, deny it of what may be called "appearance *überhaupt*"; *i.e.*, of appearance in the widest sense, as comprising both false appearance on the one hand, and true

[1] *Op. cit.*, p. 132.

appearance, or reality, on the other. In other words, a necessary law of thought is by its very nature incapable of serving as a criterion for distinguishing appearance from reality. The law must be operative in *all* thought, irrespective of the character of the thought as true or false: since, if it is not so operative, it forfeits its claim to be a genuine necessity of thought. The real meaning therefore of the dictum that "ultimate Reality is such that it does not contradict itself" turns out to be "Appearance, as such, cannot be self-contradictory". Or, rather, the only sense in which appearance can be self-contradictory, is that there can be such a thing as the appearance of self-contradiction without the reality of it.

III.

But since appearance, as such, cannot be really self-contradictory, it follows that if the appearance A is found to combine the attributes B and C, then we are bound to regard this fact as a decisive proof that C cannot be truly described as not-B, in the sense contemplated by the principle of contradiction. As Mr. Schiller puts it, "Nothing which *exists*, in however despicable a sense, can really be contradictory. . . . If, therefore, it appears 'contradictory' the fault is ours."[1] To admit that A is truly appearance, is to deny that it can be really self-contradictory. It has, indeed, been already shown, as Mr. Schiller also suggests,[2] that the only alternative would be to regard, not appearance as such, but reality, as essentially self-contradictory. If A has so much reality as is implied in the fact of its being an actual appearance, then its self-contradictory nature, by removing it from the realm of thought, must enthrone it in the kingdom of the thing-in-itself. On the other hand, if we *can* deal with A in thought to the extent implied by our thinking of it as an actual appearance, then A must be essentially amenable to the necessary conditions of thought.

The conclusion above set forth can be obscured only by assuming, with Mr. Bradley, that "not-B" as (1) implying incompatibility with B—which is the sense required by the principle of contradiction—is necessarily identical with "not-B" as (2) simply implying difference from B. And we have already seen to what result that assumption leads Mr. Bradley himself. Having, in fact, once realised that "S is P" cannot without self-contradiction be regarded as really self-contradictory, we have no longer any excuse for confus-

[1] *Humanism*, p. 187. [2] *Ibid.*

ing the above two senses of "not-B". And once we have realised the ambiguity of that expression, and have recognised the sense it must bear for the purposes of the principle of contradiction, we shall have no difficulty in perceiving that the only way in which we can decide the question whether so-called "not-B" is really incompatible in thought with B—whether, that is, an alleged contradiction is real—is *by applying the test of experience.* The only thing that can render "not-B" really incompatible in thought with B is—not the fact that the former is *called* not-B—but our actual inability to regard them as common attributes of the given subject A. Instead of saying, therefore, that thought is to decide whether experience is self-contradictory, we must say that only experience can decide whether an alleged self-contradiction is really such or not. The more irresistible the proof that a so-called contradiction is really present in an actual experience (such as change), the more inevitable is the interpretation that the so-called contradictory elements thereof are *not really* contradictory. In other words, the apparent proof that such a contradiction is real, is really a proof that the contradiction is only apparent; and conversely, if the contradiction that seems to be disclosed is really a contradiction, that is a proof that the analysis has been incorrectly performed.

IV.

The present paper will have fulfilled its object if it has succeeded in showing (1) generally, that there are difficulties in connexion with the intellectualist norm of non-contradiction, at least as serious as any involved in the pragmatist acceptance of the reality of change; and (2) specially, that Mr. Bradley's uncritical use of the principle of contradiction commits him to contradictions which, judged by any standard, seem real, and judged by his own standard are necessarily so.

As against those, therefore, who gravely raise the question, "Is motion possible?" I would as gravely put the prior question, "Is self-contradiction possible?" And this question, I venture to think, is one which whosoever rejects the idea of change as self-contradictory will find peculiarly hard to answer satisfactorily. If he is not in a position to show that precisely such self-contradiction as he professes to find in change is theoretically possible, he, of all men, will of course not ask us to believe that it nevertheless is real. But if he *does* succeed in establishing the possibility of a genuinely self-contradictory notion, he will thereby have uprooted the

principle that a self-contradiction, *qua* unthinkable, can have no place in reality. On the other hand, to maintain that the contradiction, the reality of which it is sought to establish, resides not in the notion but in the thing itself, would be to abandon altogether the position, that what is unthinkable cannot possibly be real. In short, to assume the possibility of self-contradiction in change—whether that contradiction is located in the notion or in the thing—is to deny the impossibility of self-contradiction in reality. Indeed, so far as the self-contradictory nature of " A becomes B " is bound up with the self-contradictory nature of " S is P," so far is it bound up with the view that self-contradiction is something the *avoidance* of which is not possible—nor even desirable. The champions of consistency-at-any-price really must make up their minds as to whether self-contradiction is possible or impossible. That either alternative is equally fatal to the contention that change is unreal, is their misfortune, and not our fault.

But that, I admit, is an *argumentum ad hominem*. The real problem, as I understand it, is this : What is the real nature of self-contradiction ; and what is the nature of the condemnation to which it is truly subject ? And, further, What is the real relation between self-contradiction and error ? These questions admit, I believe, of an intelligible answer ; but not without our having recourse to those very categories which Mr. Bradley condemns as false on the ground of their being self-contradictory. It would be interesting to know if Mr. Bradley can furnish a solution of our problem, which shall be at the same time a justification of the method followed in *Appearance and Reality*.

VI.—PHENOMENALISM IN ETHICS.

By F. C. Doan.

The most characteristic feature of present-day metaphysics is the distinction which is being made more and more conspicuously between the "inner" and the "outer" meanings of a given fact, its aspect as phenomenal and its aspect as noumenal. The very considerable efforts of Prof. Royce and Mr. Bradley, for example, have had at least this effect even among unbelievers:—that the latter are indebted for greater clearness of conception and truer insight into the meaning of the *phenomenal*. A defence of phenomenalism in Psychology published in Mind from the pen of Mr. Bradley has inspired largely the thought of this following article. In general our thesis will be: that the outer meaning of an act, even in the cautious thought of Prof. Royce, and much less in the confessedly unknowable sense of Mr. Bradley—the outer meaning of an act is never operative in producing that act. The meaning of the act as a present event with its psychological flurry of associates, it is this which is the vital, telling feature of the act, and not its completed meaning as it appears when set consistently into a monistic whole. Any interpretation of an act in terms of a greater world-theory is an account of that act which either (1) refers it to a conception merely writ larger than its own simple meaning and yet of precisely the same order of fact, or else (2) falsely counts as operative that which is merely the metaphysical condition of complete thinking about the act and not the actual condition under which the act may be, and almost always is, performed. In a word, a metaphysic which proposes a completed reality has no motor quality and so is non-ethical.

We may define phenomenalism provisionally in the words of Mr. Bradley as "the confinement of one's attention to events with their laws of co-existence and sequence. It involves *the complete abjuration of any attempt to ask in psychology for ultimate truth or consistency, and it involves the adoption*

as relative truth of whatever serves best to explain the detailed course of facts or those particular ways in which things happen."[1]

Thus it will appear that there are two widely differing attitudes which one may assume toward experience. One of these Mr. Bradley has just expressed for us under the name of phenomenalism. The other of these is that which Mr. Bradley esteems to be the metaphysical attitude *par excellence*. In this latter case one attempts an explanation of experience not in its character as a present event which involves a past or future content not at all, except in terms of "dispositions," the hypothetical laws of a given moment of consciousness; this latter attitude on the contrary attempts an explanation of a given experience in terms of what we have called its "outer" meaning and involves an extension of the meaning of the experience to the point where it gets an appropriate setting in a metaphysical whole of experience. Thus, a moment of time considered phenomenally would be merely what C. Lloyd Morgan describes somewhat loosely when he speaks of the "moment of consciousness"; that is, a moment for phenomenalism is merely any given state of consciousness with a past and future involved in it only in the form of "dispositions"; here there is no inconsistency in alleging that the moment both has and has not duration because, forsooth! we do not allege all this in the name of metaphysics but merely in the name of a phenomenalistic psychology. Now on the contrary a moment of time when viewed metaphysically—let us say noumenally—is at once infected fundamentally and in its inner core by this foregoing contradiction which *phenomenally* was of no import. Our thought of a moment of time is not metaphysically complete until somehow we have reconciled the fluidity of the passing moments with the rigidity of a time which does not pass.

This distinction between the attitudes of phenomenalism and that of noumenalism is closely allied to, if not identical with, the more common distinction between the *naïve* and the reflective attitudes towards the world. The *naïve* mind, for example, has no troubling difficulty with the fluidity of passing time until in reflexion upon the alleged eternity of time it experiences that "ache" of the mind which caused Emerson to prefer infinite depth of life to infinite length of it. And why should the mind in its strains after a completed reality experience this ungrateful ache? The explanation is

[1] See MIND, N.S., vol. ix., No. 33, p. 26. The italics are ours.

not far to seek. We have just said that the two possible attitudes in philosophy are closely related to the attitudes in our common experience which we know as, the one *naïve* and the other *reflective*. And now we may say further that *no reflexion can complete itself upon the* naïve *materials of experience*. In other words these two attitudes of mind represent in fact two fundamentally disparate worlds, the one the world of all actual or possible experience, the world of phenomena; and the other the world which is inevitably the metaphysical condition of final thought about the world of phenomena, but which is never by any device of language or thought converted into a world of possible experience. Our meaning will become clearer in another connexion. Meanwhile the purpose of this paper may now be expressed as an attempt to indicate that the sanctions, the impulses of our moral life are dependent, not upon any reference of this moral life to a metaphysically completed world-life, but at the very most upon a large, though not absolute, extension of this world of actual or possible experience to the point where we should have a world of moral experiences made actual but with a reality nevertheless which would still be phenomenal.

A priori phenomenalism in ethics is based upon the conviction that *isolation* is the very inner nature of things, as we do or may ever find them by experience.

A posteriori this phenomenalism takes account of the fact that the agent is unaware that his every moment is so tightly bound up with a metaphysically complete world, that his every step is trembling the universe to its very foundations, the sound thereof echoing and re-echoing into the remotest corners and most distant corridors of the world. The man in the street will deny that any spot in the world is thus intimately identified with other spots either phenomenally or metaphysically, and this denial we take to be adequate to invalidate at least the metaphysical presupposition of completed reality as operative in regulating any partial reality. On these grounds,—and the foregoing evidence of common experience would alone be sufficient support of the supposition,—phenomenalism rests its claim upon a conception of this world of experience as a multiverse of isolated facts, at least *ethically* as well as psychologically, whatever may be Reality metaphysically.

We may best indicate further what we signify by these two differing attitudes toward experience by introducing at once two illustrations of them.

In the matter of freedom for example. Mr. Bradley restricts the meaning of phenomenalism so that one confines

his attention to "events with their laws of co-existence and sequence". Here obviously the possibility of freedom among events is by definition excluded. Phenomenalism thus narrowly—and as it seems to us arbitrarily—conceived would involve one in determinism. There could be therefore no ethic of phenomenalism in any true sense; and one would be forced beyond the region of phenomena "with their laws of co-existence and sequence," in order to secure a freedom and a consequent ethic. It is quite obvious that freedom is the presupposition of any hortative ethic and equally so that determinism is the presupposition of psychology. We need not question whether psychology can proceed with its theories in a world where the possibility of freedom is not at least *ex hypothesi* ignored. A world in the degree that it is free is in that degree capricious, and caprice would make our results in psychology for ever uncertain and indeterminate. But it is important to note in passing that this presupposition of absolute causality in the world of experience is a mere *conventional* device—*i.e.* is merely a conventional agreement which in actual experience here and there may turn out to be a fictitious agreement; but it is nevertheless an agreement which in spite of its possible fictitious character is quite legitimate since it serves the worthy purpose of securing psychology upon the modern pedestal of the exact sciences. But this conventional presupposition of causality among the events or phenomena that are for psychology is quite different from the presupposition which extends the same determinism to cover descriptively *all* phenomena or events. If there is a problem of freedom at all it is a problem which concerns itself with a certain class of *phenomena*, or to be more precise it is a problem which concerns itself with a certain attitude toward *phenomena*. The *phenomenal* character of the individual's activity would not in any way be disguised or transcended by the infusion of freedom into his acts. And the act or the phenomenon in its true sense would be merely an *isolated* event; the question of its causation would so far remain abrupt. So far as *phenomenalism* is concerned the manner of sequence among "events" is unimportant though this would be of prime significance for the interests of psychology. This is not an attempt to define or to defend freedomism; such an attempt would conspicuously exceed the limitations which are promised by the title of our paper. Our point is merely this: that any genuine freedom is to be found among phenomena and that in some sense there must be for the purposes of ethics a freedom in phenomenalism. If this freedom is of such a sort as to

make certain events capricious or unpredictable then the field of psychology as a natural science is limited, and the phenomena of psychology are not inclusive of all phenomena. Or if—which is our own view of the matter—freedom among phenomena is merely a certain attitude toward them which is assumed for the purposes of practical living, an attitude which curiously enough would have an entirely adequate psychological description—if, we say, freedom is of this latter sort the same world of phenomena has a different aspect and meaning, in the one case when being scrutinised by psychology and in the other case when being expressed, and even in a legitimate sense caused, by the pulsating living of them.[1]

If we agree, therefore, that phenomenalism has no necessary issue in determinism; that if there be freedom at all it must be a freedom which in some sense and in some way frees *phenomena* from their "laws of co-existence and sequence," the question at once persists, "What is this freedom?" And here one may assume either of the two attitudes with which this article was introduced, one of which we called the phenomenalistic or *naïve* and the other the noumenalistic or reflective.

Assuming this latter attitude and asking how a phenomenon can be essentially free we shall be forced into a world not of phenomena but of some sort of reality which is intended to relieve the inconsistency of the *phenomenal*. This world we may provisionally call the noumenal, the world made so familiar by Kant as the world of things-in-themselves. The reality of supreme worth is the moral life. This must be saved at any cost, and so we find Kant astonishing beyond credibility his philosophical contemporaries by his apparently arbitrary postulation of these great realities of the moral life which had been analysed away in his previous essay in epistemology. It is exceedingly doubtful if this apparent caprice of the great philosopher has ever been understood. We must not here exceed the limits of our article by making another contribution to the extensive literature of the subject. It will be sufficient for our purpose to indicate that there are two possible interpretations of the world in which freedom has a supreme reality. One of these is the *completely reflective* view which gives us a disguised freedom in a world of completed experience or reality where all appearance has *disappeared*, and where we are se-

[1] This view will of course be recognised as closely allied to that of Prof. Hugo Münsterberg.

cure in all sorts of logical consistencies and ethical beatitudes which are incredible and even inconceivable in this world of phenomena; phenomenal partiality, the inner and outer inadequacy of the phenomena,—all these maimed phenomena are made whole; partial ignorance has been found to be one aspect of absolute knowledge; error mysteriously becomes the highest truth, evil becomes partial good, etc. In the midst of these transformations our passing experience which seems to come to us with the guarantee of reality and which indeed seems to be in exclusive possession of the stamp of reality—this luminously real of passing experience is found to be mere appearance. The sportive dwarfs of our momentary experience are merely tolerated good-naturedly and *for the sake of a psychology of experience;* real and absolute life being quite different and that in such a way as to invest the passing moment with the *insignia*—not its own—of eternal reality. Now saying nothing of the inconceivability of this alleged real world of metaphysics, we have insisted that it is in any case a world disparate from any world of possible experience. We are reliably informed by our inner consciousness of the inevitable partiality of experience. It is incredible, for example, that this inner consciousness of mine, which has so conspicuously and so inevitably the stamp of privacy, can be *wholly* taken up into a consciousness of a higher order, however largely it may be a spark in this larger flame; again it is incredible—to make the point more general—that in experience the world of particulars will ever be found to be completed by the same order of facts; *in experience* the centre of a stone for example will always be merely the just disappearing last particle of it;[1] or the outer limits of the world of experience will be inevitably the largest possible experience merely. This world of the reflective or noumenalistic attitude is not the world of *real experience.* Obviously freedom in a world of this sort would be as unreal as all the other alleged furnishings of such a world.

But though it is true that so long as we examine reflectively experiences in their character as events we may require a logical postulate which in the last analysis is *merely* a logical device; it is nevertheless true that viewed naïvely, or in their character as data for the moral life, these same experiences become suffused with a very different sort of reality. Freedom, for example, requires no greater verity than this: that it should be *felt.* What boots it that a free act is an isolated act, or even that such an act is inconceivable to a certain

[1] Mill calls this the "*minimum visibile*" (see *Logic,* p. 148).

attitude, so long as it stubbornly clings to its previous reality as being merely a phenomenal characteristic of experience? After this somewhat disproportionate introduction we may neglect the problem of freedom with the thought that *phenomenally* freedom is felt to be a characteristic of the passing experience, of the phenomenal event which as material for psychology has one kind of reality and as material for the moral life has a reality of a quite different sort, our present point being that in both cases are we legitimately within the boundaries of phenomenalism.

We may now introduce very briefly our second illustration of these two attitudes towards experience and of what we have considered to be the two disparate worlds in which these two attitudes inevitably issue, the one the world of rigid reality which is merely the background for the other, the world of fluid-experience. What would be the *self* corresponding to these two methods of viewing experience? It will be claimed by some that phenomenalism gives us a Self too composite, or too partial, etc., to be suitable for ethical purposes; that the moral life can be made intelligible only by the importation into it of some metaphysic of the soul that will give it a substance more unifying and more universally identical and permanent than such devices of psychology as "Apperception," "Teleological Memory," etc. But here again we insist that for *naïve* experience the feeling of identity, the content of mind at any given moment with its connexions with past experiences in the form of "dispositions"; that the feeling of "warmth" and "intimacy" which shifts perceptibly with the shifting of the mental content of which it is the self-consciousness but which nevertheless possesses a "functional" identity—we insist upon it that this interpretation of the self is adequate alike for psychology and ethics; that the ethical life is not the absolutely completed or interpreted life but that it is peculiarly the life of phenomenal movements; that any conception of it from the point of view of absolute sanctions, absolute ends, absolute organisations, etc., makes impossible the act of appropriation which, as we shall see later, is the distinctively ethical act. This self which Mr. Bradley accepts as adequate for psychological purposes and which we appropriate as being also adequate for ethical purposes has been so admirably presented in the article already referred to that we need give no further analysis or description of it. Our point is merely that here as elsewhere in experience the phenomenalistic attitude alone can bear fruit; that the absolutist attitude can give at most a self which has no motor

quality and which is merely the logical background of the phenomenal self, the self of Ethics.

With these two illustrations in mind we may say that the important word in Mr. Bradley's preliminary sentence is not "sequence," etc., but is "events". By "event" one may mean for the purposes of phenomenalism merely that which in actual experience is cut off from what precedes and from what follows; in a word that which does not require a completed world-theory for its interpretation. It is an experience complete in itself and only metaphysically a part of any absolute whole. Thus for the purposes of this discussion we consider the essence of phenomenalism to be expressed as the "complete abjuration of any attempt to ask in psychology[1] for *ultimate truth* or consistency" or "the adoption as *relative truth* of whatever serves best to explain the detailed course of facts". Questions which will seem to force the issue into the field of metaphysics—as for example the question of phenomenal connexions—will inevitably arise but they will not be such as to strike at the very roots of this doctrine of phenomenalism in ethics. This latter attitude in ethics is essentially a practical method, proposing a theory of relativity which for the purposes of actual motor life will resist the insidious advances of a monistic metaphysic; a theory which is content, when applied in ethics as well as when applied in psychology, not to interpret events, acts, phenomena, etc., by absolute standards; standards which become at once impossible tests or explanations because incommensurate with the simple, isolated phenomena which are to be interpreted. The plea of these phenomena, these isolated events which populate the whole world of possible experience—their plea that they bring with them their own interpretation, their own full meaning, their own test of reality—this plea is to be respected.

The ethical significance of the distinction which metaphysics is making between these "inner" and "outer" meanings of a phenomenon, a bit of experience, is in the last analysis found in the distinctions between monism and pluralism, the latter of which we consider to be the legitimate issue of phenomenalism. Is an act good in the degree that it is rational—rational, *i.e.*, in the monistic sense? Or is an act good in the degree that it commands a more emotional, a more inner sanction? Are we or are we not reliably assured by our inner consciousness that the appropriation of smallness, privacy, or what not, is the ethical act *par excellence?*

[1] And we may now say "in ethics".

In general, monistic constructions have resulted from an emphasis of the speculative attitude rather than of the practical attitude toward experience; not what the experience is on its own account or in its own phenomenal character, but what its presently real meaning *implies* has been the consideration taken as representative of its genuine philosophical significance. For long it has been tacitly assumed in certain philosophical circles that the rational is synonymous with that which is (at least conceptually) complete; in one case completely blocked, in another case completely organised. Now, that neither case represents the actual fact, it is the purpose of what Prof. James defends as "radical empiricism" to prove. It is the object of this paper incidentally to indicate in its latter portion that an empirical organisation somewhat more pretentious than that which is necessary in Prof. James's system is the presupposition of the moral life; but chiefly that this organisation falls short of the concrete monism of Hegel; the latter representing in a situation that which is logically implied in it but which is ineffectual. The situation is logical, the act is mostly alogical.

Our meaning will be clearer if we give brief notice to two types of monistic interpretation.

The first of these, with which we shall have little concern as it denies the validity in any sense of pluralism, is the abstract Monism[1] of Spinoza and in general of Hindu thought. In this abstract monism there is but one reality, all particularity being illusion. The one may be identical with the whole of Reality; this is the view of the Vedantist system of religious philosophy and of Spinoza's *Ethics*. "Besides God no substance can be granted or conceived" (Prop. xiv.). The logical outcome of this view is absolute rigidity; or put more softly it is a "rest" in God which is taken as the highest blessedness, but which is essentially the renunciation of all participation in life. Witness the word of the sweet singer and mystic Thomas à Kempis: "Above all things and in all things, O my soul, thou shalt *rest* in the Lord always, for He is the everlasting rest of the Saints". Another type of this Abstract Monism identifies the One with the Nothing. Such is Buddhistic Nihilism if we accept the common view of this system. The Sankhyan system seems to partake of the character of both varieties of Abstract Monism. We are but slightly concerned with this

[1] "Henism" has been suggested as a suitable designation of this type of Monism.

type of Monism; for it will be found that in those cases where it has seemed to issue not in rigidity and consequent insipidity, but in some sort of active functioning of the agent, it has in fact taken on the character of the concrete type of Monism which we are about to consider. A consistent adherence to Abstract Monism is a moral impossibility. And it is the special object of the remaining pages to prove that it stands no otherwise with concrete monism, our only expedient therefore being a resort in ethics to radical pluralism, the only legitimate issue of phenomenalism.

Let us consider therefore what has been called the "Concrete Monism" of Hegel, for example. By a certain type of interpretation which the writer accepts but which need not be described in this connexion, the world of Kant's *Kritique of the Practical Reason* would be of this concretely monistic sort, though the more popular and inaccurate interpretation of this world of the "Practical Reason" relegates it unsympathetically to a region of things-in-themselves quite apart from this region of partly experienced phenomena. But that Kant in his second *Kritique* and in his *Religion within the Bounds of Bare Reason* intended merely a certain attitude assumed for the purposes of the moral life toward an otherwise causal world of phenomena—that Kant meant merely the twofold attitude toward the same Reality we are assured. Our present point in passing is merely that in his conception of Perfection, for example, Kant has become involved in the difficulties of Concrete Monism.

By the fundamental position of his Concrete Monism it is alleged that the real is co-terminous with the rational and that the ethical, moreover, is completed rationality.[1]

The first of these presuppositions we must call in question, if by "real," as identical with the rational, is meant the real of actual or possible *experience*. The world of our thought is dichotomised into the facts of actual or possible experience which have merely a phenomenal reality and on the other hand those rational devices—not contential—by which the world of phenomenal experiences gets its absolute interpretation, but which have only this ideational reality.

We may illustrate the distinction by reference to the epistemology of space-conceptions. If one introspect his experience when he perceives a certain quantum of space, he will find that this spot of space is being perceived iso-

[1] Thus it is that we find "goodness" defined as "the Identity of Idea and Existence" (see Bradley's *Appearance and Reality*, especially chap. xxv.).

latedly and that it is only in reflexion upon the experience that he becomes involved in what the late Dr. Martineau called an "ontological apprehension" of an infinitude of space in which the finitude gets its setting. In a rigidly metaphysical sense it is unquestionably impossible to image a spot of space without relieving the inner and outer incompleteness of it by the conception of an infinitude. But it is important meanwhile to notice two points which are reported to us by our common experience and by our inner consciousness of the nature of experience. (1) No additive process, however long continued, can group any number of finitudes into an infinitude of space.[1] So in ethics no summary of acts, each an improvement upon its predecessor, can give us completed perfection; and no enlargement of a partial organisation of the world can be adequate to the conception of completed organisation. And yet each of these absolute completions is the inevitable, metaphysical condition of its appropriate finite term. (2) Our second point, closely related to the foregoing, is: that just as an infinitude of space, though the metaphysical condition of thought about a finitude of space, is quite insignificant to the *naïve*, unreflective mind in its perceiving of space and space-relations; so of the ethical act, the agent can perform it and assess it in virtue of its own inner meaning in the passing experience, being only metaphysically and not phenomenally involved in a race toward a constantly receding goal.

Take the mathematical series:—

$$1 + \tfrac{1}{2} + \tfrac{1}{4} + \tfrac{1}{8} \ldots 2.$$

Here we have as the limit of the series the definite, conceivable number 2. But meanwhile, though it is true that the series can have a completed meaning only in reference to its limit 2, it is also true—and this is important—that the series never reaches its limit 2; or, to put it otherwise, the limit 2 never gets directly into the series in such a way as to saturate the series with its own meaning.

Now let us represent parts of the phenomenal world, the apparent world, as "A," Appearance; and let us represent the noumenal world, the real world in the monistic sense, as "R," Reality. Then, letting "n" represent an unknown

[1] See Spencer's *First Principles*, *e.g.*, pp. 26 *et seq.*; also Martineau's *Essays*, etc., essay on Mansel's *Limits*, etc., pp. 134, 135 *et seq.*, also essay on *Science, Nescience and Faith*, pp. 203 *et seq.* Our only point of disagreement with Dr. Martineau is in his assertion that this "ontological apprehension" represents a reality in things; *i.e.* a reality of possible or actual experience.

increment-factor of Appearance, we might have some such series as:—

$$A + 2\frac{A}{n} + 4\frac{A}{n} \ldots R.^{1}$$

Now just as in the case of the mathematical series (I.) the series implies its limit 2, but (II.) is never directly suffused by its limit, or in a word never reaches its limit; so in the case of the world-series there is no possibility that the terms of the series can ever be coloured by any direct contact with the noumenal Reality which each of its terms implies.

We have taken this as specially illustrative of the Kantian system.[2] If we let the terms of the series represent the ever changing movements of the agent as he deliberates and chooses what his life shall be at any given moment,[3] the question arises, "In what sense, if at all, is a given term in the series determined by the limit of the series?"

The series is only conceptually determined by its limit. Any given term in the series is determined by the inner meaning of the series itself and not by any outer meaning which it must have in reference to its limit. This inner meaning of the series in the illustration from mathematics was the constant $\frac{1}{2}$. What is the meaning of the ethical series which determines each accretion or decretion?

The clue is to be found in that ambiguous word borrowed

[1] It is of course obvious that no particular series in the moral order would proceed with this graphic regularity.

[2] The lettering in the system might be appropriately changed as follows: letting "s" represent partial selfhood and "S" noumenal selfhood; whence the series: $s + 2\frac{s}{n} + 4\frac{s}{n} \ldots$ S. Or letting "p" represent partial perfection, the perfection of Appearance and "P" noumenal perfection; whence the series: $p + 2\frac{p}{n} + 4\frac{p}{n} \ldots$ P.

[3] We may suggest here in passing a further difference between this moral world series and the mathematical series. If the mathematical series were not limited in its nature by definition, there might occur at any point in the series such a change that we could see that the series had reached or even passed its alleged limit. In such an event we could merely predict shrewdly that any given term will sustain a certain relation to its preceding term by observing what has been true of preceding terms. Now this is precisely what occurs in normal, imitative or habitual, responses which we make to our environment. Another point in this connexion is that we know *a priori* by an examination of the internal meaning of the moral series that, unlike the mathematical series, there can never occur such an internal disruption that the series will ever reach or pass beyond its limit. Here seems to me to lie the fundamental error of Bradleyan systems. The limit "R" does not in any way connect with the workings within the series.

from Evolutional Philosophy, the word "Development".[1] Each term of the ethical series is a development from the preceding term and determines what the following term will be, or at least ought to be in order that the organism represented by the series should get its most natural and fullest expression. The series of the moral life has its own inner meaning which requires no explanation in terms of a conceptual limit, but only in terms of the adjustment of meanings, attainments, claims, etc., in the terms of the series itself. Not only the terms of the series are found in the world of phenomena, but also the sanction therefor. Just as it is possible to proceed naïvely with the mathematical series securing each term as the preceding term multiplied by $\frac{1}{2}$, and moreover not allowing at the moment that logically the series approaches 2; so also it is possible naïvely to express each movement of the moral agent as a fragmentary outcome either of the preceding term, or (more largely) of our conception of the meaning which this phenomenal organism has.[2]

To summarise: there are two attitudes from which we may view the same Reality of Experience; one of these in Mr. Bradley's view is exclusively the psychological attitude; and the resulting system of psychology is to be known as phenomenalism. In this view one regards merely a present moment of consciousness with its phenomenal limitations, these latter being allowed merely for psychological purposes; a past or a future span of consciousness is involved in this psychological moment only as an element of the present moment itself and which we know merely as "dispositions," one of the working hypotheses of psychology or phenomenalism. The other attitude on the contrary would insist upon a complete interpretation of a given moment, a given experience or what not; "dispositions," could no longer remain as merely convenient hypotheses but would require for the rationalising of them that they should be traced infinitely to

[1] See articles of Antonio Llano in the *Open Court* on "Developmental Ethics," vol. xi., nos. 3 and 4. Spinoza and his followers surrender unconditionally to the impossible limit of the series.

The outer limitations of the organism are interestingly put by M. Ferrière in his recent "*Cause première d'après les Données expérimentales*". See especially the distinction between "internal" and "external" finality.

[2] The merely conceptual character of the monistic limits might also be illustrated by a series of concentric circles growing smaller and smaller in one direction and larger and larger in the opposite direction. The limits of this series would be, zero in the one direction and infinity in the other. *In neither case would the limit be a circle; i.e.*, in neither case would the limit partake of the nature of the series.

their utmost lairs in the being of the Absolute. So of a given spot of experience or of reality; so also of activity, of the self, etc. In a word metaphysics presumes to relieve the partiality of those data which for psychology may consistently remain partial; in fact whose very partiality it is which characterises them as the data of psychology.

Our secondary thesis throughout the foregoing discussion has been that this latter construction of metaphysics, though an absolute condition of thought about an experience, becomes however a mere fiction when it presumes to represent an Absolute Real of actual or of possible *experience;* that the inner nature of experience is this very phenomenal character of it; and that the metaphysical remedy of this alleged deformity of experience is merely a formal device by which we slur over experience without correcting its deformities.

But however this may be, our main thesis remains unchallenged: that the moral life is to be found and is to get its expression within the phenomenal series and that any absolute view of it must be peculiarly ineffectual in attempting to complete the series in facts of experience. Here as well as in psychology one's attitude must face the partial real of experience in the frank consciousness that it can never be made whole; nor indeed does this moral series have the need to be made whole, for it has its own sanctions, its own motives securely within the series itself. These inner meanings which are all-sufficient in practice are to be found within the organism with its phenomenal character, its constant rewards of organic satisfactions and penalties of organic disturbances. That this organism can be defined with even greater definiteness than this we shall attempt to indicate in a following article on "The Concrete Moral Life of Phenomenalism".

VII.—DISCUSSIONS.

THE DEFINITION OF 'PRAGMATISM' AND 'HUMANISM'.

His characteristic generosity has prompted Prof. James not only gallantly to come in and take his full share of the obloquy with which these new conceptions have been greeted,[1] but also to try to minimise his own services in their development. And inasmuch as his disclaimer of originality, if uncorrected, might go down as authoritative, I cannot allow him so greatly to understate the debt I owe him. If at the same time I take the opportunity to discuss terms of which the relations are as yet often confused, less by reason of their inherent affinity than because they have found the same expositors, and to give reasons for partially dissenting from the delimitations which Prof. James has proposed (p. 455), I trust that the unavoidably personal aspects of my explanations may thereby be sufficiently obscured as to seem tolerable.

In the first place, then, I must confess that indignation at what seemed the blindness of Prof. James's critics in habitually admitting his eminence as a psychologist, but denying the coherence of his philosophic views, was a great stimulus to me in trying to bring out the inner connexion of his scattered dicta about the will to believe, the teleology of perception and conception, the nature of 'necessary' truths, the distinction of immediate and discursive knowledge, etc. The discovery also that a willingness to believe was clearly, in some cases, a condition of the attainment of 'truth,' and a cause of its 'reality,' naturally prompted to an inquiry how far this influence might be traced, and what must be the general nature of an intellect in which such phenomena could occur. When subsequently the pamphlet on *Philosophical Conceptions and Practical Results* announced to me the naming of 'pragmatism,' I found acceptance easy. But it seemed natural to generalise also this principle of Peirce and to inquire similarly—What must be the nature of a mind in which practical consequences can become determinants of truth or falsehood? This inquiry led to extensive and deepening doubts of the whole intellectualist interpretation of the nature of knowledge, which has now come to seem to me as inadequate intellectually as its consequences are deplorable ethically, and to be all honeycombed with ambiguities, errors and

[1] In the October number of Mind; *cf.* the June number.

incoherences. Both the critical and the constructive results embodied in *Axioms as Postulates* and *Humanism*, moreover, seemed to me to follow so directly and logically from Prof. James's principles that I am still astonished that none of his immediate pupils seized an easy opportunity of anticipating both Prof. Dewey and myself. Since then I have become acquainted with Prof. Dewey's important work, which I take to have finally demonstrated the impossibility of the correspondence-with-reality view of 'truth,' and to ensure the overthrow of Absolutism by weapons wrested from its own armoury, *viz.*, by the very argument it had urged against realism.

This bit of psychical history will perhaps explain why I scruple to restrict 'pragmatism' to its original use. In Peirce's sense it seems to crave an extension which it has undoubtedly received, and even in Prof. James's account of the matter it is by no means easy to make the distinction sharp.[1] To say that 'truths should have practical consequences' is very vague, and hints at no reason for the curious connexion it asserts. It is hard, moreover, to see why even the extremest intellectualism should deny that the difference between the truth and the falsehood of an assertion must show itself in some visible way. Even its actual denial, therefore, by over-zealous controversialists, hardly persuades me that Peirce's principle is more than a truism,[2] which hardly deserves a permanent place and name in philosophic usage, and naturally merges and evolves into the wider sense of the term so soon as it is scrutinised.

For to say that a truth has consequences and that what has none is meaningless, must surely mean that it has a bearing upon some human interest; they must be consequences *to* some one *for* some purpose. But now, we may ask, *how are these 'consequences' to test the 'truth' claimed by the assertion?* Only by satisfying or thwarting that purpose, by forwarding or baffling that interest. If they do the one, the assertion is 'good' and *pro tanto* 'true'; if they do the other, 'bad' and 'false'. Its 'consequences,' therefore, when investigated, always turn out to involve the 'practical' predicates 'good' or 'bad,' and to contain a reference to 'practice' in the sense in which we have used that term.[3] So soon as therefore we go beyond an abstract statement of the narrower pragmatism, and ask what in the concrete, and in actual knowing,

[1] It did not require the verbal ingenuity of Mr. Joseph's wrestlings with the conception in the last number of MIND to convince me of this.

[2] So far as I have observed, Prof. A. E. Taylor alone has denied it outright (*McGill University Magazine*, iii., 2, p. 50). But even he prudently refrains from trying to illustrate how "between two doctrines which are, so far as their consequences in practice are concerned, indistinguishable, there may yet be all the difference between proved truth and demonstrable contradiction".

[3] The strange narrowness of the intellectualists' conception of 'practice' is one of the most painful revelations of the controversy. They always profess at least to take the most sordid views of the 'useful'.

'having consequences' may mean, we develop inevitably the full-blown pragmatism in the wider sense. All that the latter adds is a denial that into the establishment of truths there enters any other process than the valuation of their consequences. Peirce's pragmatism had already implied this process, but left open possibilities that other things also might go to the making of 'truth'. These possibilities are definitely excluded when the Peircian pragmatist asks himself 'What more is there in truth?' and finds that there is *nothing* more.

Hence we may effect a transition from the original assertion that the truth expresses itself in the 'consequences' to the more advanced conclusion that it so expresses itself *fully, i.e.*, 'consists' in them, and that if it is really 'true' those consequences are 'good'. By itself, however, and without such further explanation, the word 'consist' may well appear to lack precision, and I myself have never used it. But it refers to a definite situation and to a perfectly consistent attitude towards knowledge. That situation may be referred to, that attitude may be defined, in a variety of ways, according as we approach it by one road or another. I myself have availed myself freely of that right by defining what I call pragmatism, as (1) the thorough and methodical recognition of the influence of the purposiveness of mental life on all our cognitive activities; (2) as the conscious application to the theory of knowledge of the teleological psychology suggested by a metaphysical voluntarism; (3) negatively, as a protest against abstracting from the actual purposiveness of our experience in constructing theories of thought and reality; (4) as the doctrine that 'truths' are values and that 'realities' are arrived at by processes of valuation, and that consequently our 'facts' are *not* independent of our 'truths,' nor our 'truths' of our 'goods'.[1] To these definitions I may now also add three of a more distinctively logical complexion, *viz.*, (5) that *meaning depends on purpose*, and Mr. Alfred Sidgwick's pithy formulas that (6) the meaning of a rule lies in its application, and (7), *a fortiori*, that *the 'truth' of an assertion depends on its application.*

Now it is of course obvious that these definitions are verbally very various, and so sure to bewilder any critic who declines to look beyond the expression to the facts referred to. A thinker however who is really trying to grasp the meaning of pragmatism may find them helpful and may finally discover that for this purpose the expressions are really equivalent. In any case one who has not yet discovered their equivalence has little claim to flatter himself that he understands what the question of pragmatism is about.

Pragmatism then, in this wider sense, refers to the way in which our attributions of 'truth' and our recognitions of 'reality' are established and verified by their working, and sooner or later brought to the definite test of experiments which *succeed* or *fail*,

[1] *Humanism*, p. 8, slightly paraphrased.

i.e., give or deny satisfaction to some human interest, and are valued accordingly. It arises from the original pragmatism by the growth of the conviction that no other processes need be appealed to to account for the truths that are current, and expands the original 'estimation by consequences' into a general view of the mind and its cognitive activity. In other words pragmatism rests on facts which may easily be observed by any one who chooses to watch any process of actual knowing ending in the establishment of a claim to truth. The method by which the 'true' is discriminated from the false is plainly pragmatic, and has always been instinctively employed, though a full philosophic consciousness of its character has only recently been attained. And on the whole 'pragmatism' seems the best name for this method which has so far been suggested.[1]

This wider pragmatism, moreover, embodies a very important truth just now, because, oddly enough, it has not yet been discovered to be both a fact and a truism. I have long waited in vain for its critics to ferret this out, and can only put down their failure to the fact that they are still too excited to have observed how very innocuous a principle it really is. Instead of subverting all but the most grossly useful forms of knowledge it really vindicates all but a few metaphysical phrases which have no genuine sphere of application, and so can hardly be said to mean anything. Nevertheless, even here, some of the fundamental assertions are hardly in dispute. No critic of pragmatism has, I believe, directly denied either the omnipresence of psychological interest or the dependence on psychical satisfaction, which together pervade all intellectual functioning. The corollaries therefrom doubtless have not been perceived, and Prof. Taylor, and perhaps a few others, have evinced a tendency to suppose that what they imagine to be a 'disinterested' interest in 'pure' thought and 'useless' knowledge, and a (presumably unreciprocated) affection for Absolutes are somehow not to be counted as cases of emotional interest, but to be classified apart from the common herd of psychological motives. Such fancies, however, are as untenable as Kant's 'pure respect for the moral law,' and when the epistemological consequences of admitted psychological principles are calmly traced out, it will be seen that pragmatism is inevitable, and must gradually win its way to universal acceptance.

As regards what I have proposed to call Humanism, however, the situation is very different. Ideally, no doubt, it too should be a truism, for if all philosophers were reasonable and devoid of human frailties it would, as Prof. Dewey has remarked,[2] be assumed as obvious that the nature of man must be presupposed in all man's reasonings. But actually, as Prof. Dewey well points out, this assumption is bitterly contested. And this probably will always

[1] Prof. Dewey's 'instrumentalism' might perhaps be substituted were it not so open to linguistic and æsthetic objections.

[2] *Psychological Bulletin*, i., 10. pp. 336-337.

be the case. For even a slight familiarity with the psychology of philosophers will make it seem extremely unlikely either that they will ever universally consent to use man's integral, unexpurgated nature whole-heartedly, as a premiss in their lucubrations, or view its satisfaction as the conclusion to be reached, or that if they did so consent, they would reach concordant results. *Some* Humanists probably there will always be; indeed my knowledge of their numbers has been notably enlarged since my scientific caution and modesty dared not vouch for more than two.[1] But to be a Humanist there will always be needed a certain whole-souled temperament, odious to the φύσει intellectualist, and (because of their mode of life) this will always continue to be rare among technical philosophers, though no doubt in future the instinctively humanistic nature will be permitted better opportunities of growth than heretofore, even when it finds itself engaged in an academic career. And so for a long time to come we must expect still to see the great principle of Protagoras maligned or perverted by those congenitally unfitted to appreciate it.

There will consequently be many pragmatists who cannot rise to Humanism; nor indeed is there any logical necessity why they should do so. It is quite possible to accept pragmatism as an *epistemological method* and analysis, without expanding it into a general philosophic principle. No man can be compelled to have a metaphysic (else there would be no need for a Mind Association !), or at least to be conscious of it. Any one can, if he chooses, stop short on the epistemological plane, as he can on that of science or of ordinary life. If, on the other hand, he proceeds to become a Humanist, he will no doubt regard his pragmatism as merely a special application of a principle which he applies all round, to ethics, æsthetics and theology, as well as to the theory of knowledge. Clearly, therefore, we must distinguish Humanism even from the wider pragmatism.

But in the case of every philosopher who builds out his convictions into a 'system' there will always be much that is not deducible from any objectively formulated principle, and (whether he knows it or not) is subjective and idiosyncratic, due to his personal experience and personal reactions on the food for thought which his life affords. For example, in the present state of our knowledge, his interest in the question of a future life must largely depend on whether he has or has not found his life worth living. And generally it must be recognised that a philosophy is always in the last resort the theory of *a* life, and not of life in general or in the abstract. There is no reason, therefore, to anticipate that the adoption of Humanism (or even of Pragmatism) will at all diminish the number and variety of systems. Personally, indeed, it would

[1] *Humanism*, p. xvi. It grieves me to think that Prof. Dewey (*loc. cit.*, p. 335) should have misapprehended my remark. However, I am delighted to welcome him and others; the more we are the merrier we shall be, and the rosier the prospects for a '*fröliche Wissenschaf*'.

seem to me to argue abysmal conceit and stupendous ignorance of the history of thought to cherish the delusion that of all philosophies one's own alone was destined to win general acceptance *ipsissimis verbis*, or even to be reflected, undimmed and unmodified, in any second soul.

But the existence of this personal element should render critics all the more cautious to discriminate between what is due to it and to the more objective factors in a 'system'. To quarrel with its idiosyncrasies is no way to refute its fundamental principles: in discussing these, such *personalia* are always more or less irrelevant. Now in the present controversy I cannot but think that our critics have often allowed *our* idiosyncrasies to bulk so largely as to obscure the main issues; a procedure which may be partially excused by the accidental fact that there happens to be an unusual amount of coincidence between Prof. James's personal 'over-beliefs' and mine. But much as it would flatter one's *Wille zur Macht* to get them all securely tied on to the new philosophy, and participating in its success, such things as, *e.g.*, interest in Psychical Research, are not really of the essence of Pragmatism or even of Humanism, and it was, therefore, quite a relief to me to find Prof. Dewey pointedly dissociating himself from some of my most cherished convictions.[1] For really, if there is to be healthy progress in philosophy, we must have more tolerance, less party-spirit, no cast-iron creeds, and (in a word) no more absolutism.

F. C. S. SCHILLER.

[1] *Loc. cit.*, p. 335.

ENERGY AND EFFORT.

1. The studies on which the theory of Matter and Mind, distinguishable as a theory of Energy and Effort, was founded, were chiefly concerned, first, with the metaphysical works of Hume and Kant, Fichte and Schelling, Hegel and Schopenhauer; and secondly, with the physical, biological, and psychological researches of, respectively, Faraday and Maxwell, Darwin and Haeckel, Bain and Spencer. It is with reference to the ideas of the former and the results of the latter that I would have that conception of *Atoms* as *mutually determining centres of pressure* (which I first published in 1859, 1860 and 1861), and its generalisation in the proposition, *Every existent determines and is determined by co-existents*, considered and criticised. For my present conception of the correlation of Matter and Mind as, ultimately, the correlation of Energy and Effort, is simply a development, influenced by half a century of further European research, of that conception and generalisation of forty-five years ago.

2. Matter is thus conceived as a space-occupying mass, or centre of energy (= capacity of doing work). And the originality of this conception of forty-five years ago lay in this, that atoms were *not* conceived as isolated bodies with absolute properties, but, on the contrary, as bodies existing only as co-existents, and as, therefore, having their properties determined by the relations between each atom and its co-existents, in other words, Atoms were conceived as centres of Radiant Forces, or of radiating "Lines of Force," and as, through such forces, exerting determinative influences on each other. Hence, further, atoms are *not* conceived as *in* an ether with which they have no organic connexion; but as, by their emanations, constituting the medium so called. And however this theory of atoms may be modified, I venture to think that, in essentials, it will be found verifiable not only by recent researches generally on radiations, but more especially by J. J. Thomson's conclusions with reference to matter and electricity and Mendeléef's with reference to matter and the Periodic Law, and matter and the ether.

3. But Atoms are thus, as mutually determining co-existents, conceived, not only as centres of *Energy*, or capacity of *doing* work, but as centres of effort, or capacity of directing work. Directing it to what? The very conception of mutually determining co-existents implies effort to such general ends as self-conser-

vation and self-differentiation. For only by effort to such ends can an atom conceived, not as an absolute existent, but as a relative co-existent, maintain itself. And thus, there is given by this conception of mutually determining co-existents, the integration and differentiation made so much of both by Hegel and Spencer, by the former, however, as an essential part of his conception of the activity of the *Idea;* while by the latter neither can be brought into any organic connexion with his fundamental metempirical entities "matter, motion and force," not one of which actually exists, as postulated, apart from both the others.

4. It will be evident on reflexion that the conception of the Atom above indicated is a conception of it as a *live* Atom, and hence that the motion of there being an essential difference between the bodies usually distinguished as Atoms, Molecules, and Cells, is virtually broken down. But what are Atoms in the latest conception of them as "Electrons," but such live Atoms as I ventured to suggest in my British Association *Proposal of a General Mechanical Theory of Physics and Chemics* in 1859? Concerning the Physical Atom as, simple though its constitution, essentially such a system as is the Cell, determining, and determined by, its Co-existents, I refrained from adding Organics to Physics and Chemics only because I feared that such an audacity would lead to the rejection of my paper. The suggestion of a mechanical theory even of Chemistry was, in the middle of last century, more than sufficiently audacious. But progress since then has consisted, as I venture to submit, first, in the ever ampler verification of the "Principles of the Science of Motion" set forth in my *Philosophical Magazine* Papers in 1861, questionable as, doubtless, some of the illustrative explanations and minor suggestions may now be; and secondly, in its becoming ever clearer to myself that a general mechanical theory could be but one side of what, on its other side, would be found to be a general psychological theory.

5. Note, then, that the conception of mutual determination is no merely metaphysical notion of *Wechselwirkung* as for instance with Schelling; but is an inference from, or generalisation of, an immense number of inductively ascertained facts; and is, indeed, implied in that Principle of the Conservation of Energy, usually stated as a law of equivalent transformation. But if the conception of mutual determination is accepted, with that of bodies as not absolute, but relative and correlative in their properties, then, there must be affirmed for bodies conceived as centres of energy, not only a capacity of *doing* work, but a capacity of *directing* work, in relation to other such capacities, or, in a word, Effort. For otherwise the cause of motion would have to be conceived as acting from outside of the system of things. And I submit that the fundamental postulate of science is, that the causes of things are inherent in the system itself of things; or as Hume expressed it with reference to the design argument, that there is a principle of order in Nature itself.

6. Doubtless it is true that, as has so often, and by men of so different opinions, been insisted on, there is no passage conceivable from motion to consciousness, or equivalence of transformation between the one and the other. But the most distinguished of those who have insisted on this impossibility have no less strongly insisted on the "potentiality" of life and consciousness in what appears to be inanimate, though they had not solved the problem as to *how* this "potentiality" could be verifiably conceived. The hypothesis here suggested is an attempt to solve this problem. It is suggested that if atoms are conceived, as research since 1859 seems more and more to have urged, as *live* atoms, there must be distinguished in them the two correlative capacities above defined of energy and effort. And there is no question, therefore, now of an impossible transformation of motion into consciousness.

7. Motion and consciousness are regarded as correlates not sequences. Not with motion, but with the cause of motion is the origin of consciousness connected. That cause is in its mechanical or outward aspect, a differential relation of pressures; in its psychological or inward aspect, Will. But there are, at least, three degrees of Will—using the term in its most general sense—degrees corresponding to the three great orders of existents which we know. These degrees of Will may be defined as effort, instinct and volition. There is, therefore, no irrationality in deriving the consciousness of aim and choice of means, which is associated with human volition from that, perhaps, inconceivable, but certainly supposable, infinitesimal degree of Sentiency associated with the self-conservative and self-differentiative efforts of inorganic bodies. And the verification of this hypothesis should raise fruitful questions in the whole circle of the sciences, and especially in physics, in biology, and in psychology.

J. S. Stuart Glennie.

VIII.—CRITICAL NOTICES.

Einleitung in die Philosophie. Von Hans Cornelius. Leipzig: B. G. Teubner, 1903. Pp. xiv, 357.

This Introduction to Philosophy consists in the main of an attempt to prove what is the correct solution of a single philosophical problem. This problem, with which by far the greater part of the book is occupied, is the question of the 'objective existence' of matter and its relation to our minds. Herr Cornelius represents the development of philosophy as leading successively to four erroneous views upon this question—Materialism, Naturalistic Dualism and two forms of 'Dogmatic' Idealism, Sensualistic and Rationalistic. He tries to show that there are conclusive objections to all these views; and he then gives the arguments which he thinks sufficient to show that a certain other view, his own, is the true one.

In judging the book as an Introduction to Philosophy, it must, I think, be admitted that this problem, which Herr Cornelius has selected for consideration, is the one with which it is best to begin the study of philosophy. The solution of all other philosophical problems mainly depends upon principles which must be discussed in the settlement of this one; and the chief premisses used in their solution have almost always been drawn from the consideration of it. Moreover, I think it may be said that Herr Cornelius does discuss the most obvious of the premisses and principles thus involved. In the third place, his method is a good one. The attempt to prove what views are right and what are wrong is certainly far preferable to a purely historical or dogmatic treatment. And lastly, he is so clear that it is unusually easy to discover exactly what he holds to be true and false, and for what reasons.

On the other hand, it must be admitted that there are most important philosophical problems which Herr Cornelius leaves out of sight altogether; whereas he implies that he has surveyed the whole field of philosophy. With one exception, he scarcely even mentions any question, except that which forms his main theme and those which are directly involved in its solution. This single exception is that he appends to each of the views on matter and mind, which he discusses, a brief discussion of ethical views, which he takes to be connected with it; and it must be added, as a second criticism upon his book, that his treatment of ethical questions is very poor indeed, being greatly inferior both in clearness and in acuteness to the treatment of his main subject.

But it is by the treatment of this main subject that the value of the book must chiefly be judged. And against the soundness of Herr Cornelius's arguments and conclusions upon this subject the most serious objections can be urged.

These arguments and conclusions are, as has been said, divided into two groups. In the first part of the book, which he entitles 'The Metaphysical Phase of Philosophy,' Herr Cornelius states and attempts to disprove the four views named above. In the second and longer part, which he entitles 'The Epistemological (*erkenntnistheoretische*) Phase of Philosophy,' he states and attempts to prove his own view. It will presently be necessary to consider some of the arguments contained in the first part, but, first of all, I propose to discuss Herr Cornelius's own position.

By the use of the title 'metaphysical' for that part of the book in which he discusses the views he disagrees with, and of the title 'epistemological' for that in which he gives his own, Herr Cornelius indicates that he has not only a conclusion but also a method to advocate; and his argument for his position depends almost entirely upon the validity of this method. He represents it as consisting largely (though, as we shall presently see, not solely) in the *analysis* of certain conceptions. The errors of 'metaphysical' or 'dogmatic' philosophy are, he holds, largely due to the failure to make this analysis. The conceptions in question, which had come to be used before philosophy began and are still used by us every day, he calls 'naturalistic'; and 'the most important conceptions of this kind are,' he says, 'firstly the conception of *existence independent of our perception*—especially of the permanent existence of the *material world* and the things in it, including the conceptions of objective *space* and objective *time*—and further, the conception of *cause* and that of the *Ego* or *Personality*' (p. 46).

Of these three 'conceptions' it is to the first that he devotes by far the greatest share of his attention. And we shall obtain a clear idea of his method and his principal conclusions by considering his treatment of it—the conception of 'existence independent of our perception' or (for he appears, in general, to use the terms as synonyms) of 'objective' or 'permanent' existence.

He holds, then, that an 'empirical analysis' of our 'conception' of the objective existence of matter yields the result that it is merely a conception of 'the regular connexion (*gesetzmässiger Zusammenhang*) of our perceptions'. And this 'conception' he holds to be valid; our perceptions are regularly connected. So far, then, we should have it as his result that the material world *does* exist objectively and independently of our perceptions; since to think that it does so is, according to him, merely to think (what is true) that our perceptions are regularly connected. But unfortunately, as might be expected, this is not his only conclusion. He says, indeed, as a result of his method, that the very conception of the objective existence of the material world is merely the conception of an orderly connexion between our perceptions, and that

there really is such an orderly connexion; whence it would follow that the material world really does exist objectively in the only sense in which any one could ever have supposed that it does. But this is by no means what he wishes to maintain. In fact, as we should expect, his chief anxiety is to prove that the material world does *not* exist objectively, in the sense in which the Materialist and Naturalistic Dualist maintain that it does. And consequently our first objection to his argument is that it is flatly self-contradictory. He first maintains that the proposition 'The material world exists independently of our perceptions' is *identical* with the proposition 'Our perceptions are in orderly connexion'—this is the result of analysis; he then maintains that the second proposition is true; and he concludes that the first, which is, on his own showing, *identical* with the second, is false.

This, so far as I can understand it, is the main argument of the book; that is to say, Herr Cornelius's argument, and the importance which he attributes to his method of analysis, depend solely upon the commission of a gross fallacy. He supposes that he can prove a given proposition to be false, by maintaining that it is identical with (has no meaning other than) a proposition which he holds to be true. And it must be confessed that, when he so supposes, he is in the very best company. The fallacy which he commits is (to mention no other names) the very same which forms the essence of Hume's much-admired treatment of causality, and of Berkeley's treatment of the existence of matter. 'What we think of,' says Hume, 'when we think that two events are necessarily connected is merely that, when the first occurs, we are compelled to expect the second; that we are so compelled is true; and therefore we have reason to suppose it false that any two events are necessarily connected.' 'Matter,' says Berkeley, 'consists of our ideas; and therefore, plainly, matter does not exist, although our ideas do.' Herr Cornelius is, therefore, by no means the first philosopher to argue that a given proposition is false, because the only meaning which can be given to it is one which is true; I wish it could be hoped that he would be the last.

Herr Cornelius's method really consists, therefore, not in mere analysis, but in a grossly fallacious use of its results. And the contradiction, which has shown us this, also shows that his analysis is false. For if, as he holds, matter does *not* exist objectively in the sense in which the Materialist supposes that it does, then, at least, the conception of 'regular connexion between our perceptions' cannot be our *only* conception of objective existence. We certainly have *also* the conception (true or false) of material qualities really existing, even when no mind perceives them or is in any way aware of them. And, indeed, I think it is plain that it is to this conception alone, and *not* to that of 'regular connexion between our perceptions,' that the words 'existence independent of our perceptions' properly apply. At all events it is the question whether *this* conception applies to matter or not,

which has always had such a predominant interest for philosophy; it is his negative answer to *this* question, which gives its main interest to Herr Cornelius's own position; and it is certainly *this* denial which he must prove, if he is to refute the Naturalistic Dualist.

But, once this is plain, then it is also plain that, by his supposed 'analysis,' Herr Cornelius has advanced us not one step towards such a proof. It may be that he has correctly analysed our conception of 'regular connexion between perceptions'; it may even be that the words 'objective existence' are ambiguous and do sometimes apply to this conception; it may be admitted, finally (what few philosophers have greatly cared to dispute), that our perceptions are regularly connected. But in all this there is obviously nothing incompatible with the supposition that matter does exist unperceived. It may perfectly well be true *both* that our perceptions are regularly connected, *and also* that matter exists unperceived. That Herr Cornelius should suppose the contrary is only to be explained by his commission of the gross fallacy exposed above.

But, as has been said, the method of 'analysis' is only a part of that 'epistemological' method upon which Herr Cornelius relies, and which he recommends as the only valid philosophical method. The philosopher must, he thinks, not only analyse 'the psychical facts, which are directly presented to us in our developed life'; he must also answer the question of *origin*—the question how 'the more complicated phenomena are built up out of the simpler' (p. 169). The only valid philosophical method consists in a 'purely empirical investigation of psychical facts' (p. 164); but this must include not only present facts, but also the history of their development; it must, in short, be 'a universal investigation of the mechanism of our knowledge, a natural history of human thinking' (p. 162). And it is, in fact, to the investigation of the *origin* of the naturalistic conceptions, rather than to their analysis, that Herr Cornelius devotes the greater part of his attention. The second part of his book is, in the main, a study in the genetic psychology of these conceptions.

Now the only definite information which Herr Cornelius gives us, as to the manner in which he conceives this genetic inquiry to be capable of supporting his philosophical conclusions, is that he thinks it can tell us what our conceptions really are—in other words, is an aid to analysis; he repeatedly insists that a knowledge of the *origin* of our conceptions is necessary to make us grasp their *meaning* (pp. 168, 169). And it is, in fact, upon his inquiry into the *origin* of our conception of objective existence, and *not* upon direct analysis, that he relies for the proof of his proposition that it is a conception of regular connexion between perceptions. We may, therefore, test the value of his genetic method by considering its bearing upon this particular conclusion. Now, if that method is to give this conclusion, the argument must be as follows:

The origin of our conceptions being what it is, it can have given rise to no other conception of objective existence than that of regular connexion between our perceptions. But, as we have already seen, this conclusion is false; Herr Cornelius must himself admit that we actually have another, quite different, conception of objective existence, that, namely, which Materialists and Naturalistic Dualists apply to matter, and, as he thinks, apply to it falsely. But, if we actually have this conception, plainly no history can prove that we have not got it. On the contrary, its existence proves that Herr Cornelius has made some mistake in his history. Either it is not true that the origins of our conceptions are such as he thinks them, or else it is not true that these assumed origins can only have given rise to a conception of regular connexions between perceptions. The genetic method is, therefore, plainly unable to serve the only purpose which he tells us that it does serve —that of proving that our conception of objective existence is merely a conception of regular connexion between perceptions; and in what other way it is capable of supporting his philosophical conclusions, he does not tell us, and it is not easy to see. Herr Cornelius has given us a history, which may or may not be correct, of the development of our conception of regular connexion between perceptions; and, if it is correct, it may be a valuable contribution to genetic psychology; but, in any case, it appears to be totally irrelevant to his philosophical conclusions.

In the second part of his book, then, and by his own epistemological method, Herr Cornelius entirely fails to prove his main position that matter exists objectively in the sense that our perceptions are regularly connected and *in no other;* his arguments appear to be merely fallacies. But in the first part of his book he does bring forward some other arguments against the view that matter exists objectively, in the sense in which the Materialist and Naturalistic Dualist suppose it so to do; and these it remains to consider.

These arguments do not occur in his treatment of Materialism. Understanding Materialism to deny the existence of mental facts, he justly considers the existence of those facts to constitute by itself a sufficient objection to the doctrine. It is, therefore, in his treatment of Naturalistic Dualism that we find his arguments against the objective existence of a material world. He holds that a dualistic view involves four insoluble difficulties, which he calls 'Problems of Mediation,' *i.e.*, difficulties with regard to the relation of mind and matter; and the arguments which we have to consider constitute the first three of these supposed difficulties. The arguments are two: (1) That since, upon the dualistic view, the nature of our perceptions depends not only upon the nature of the material object which we are supposed to perceive, but also upon that of our sense-organs, it is impossible that our perceptions should give us a correct idea of the object in question; (2) that, upon the dualistic view, perceptions must be caused by material changes,

and conversely the will must cause material changes, and that this supposed causal relation between mind and matter is in both cases 'unintelligible' (pp. 65-69).

The first of these arguments obviously depends upon a very simple fallacy, namely, upon the supposition that the object perceived must be exactly similar to the cause of perception. Herr Cornelius even speaks of the perception as actually *composed* of what he is pleased to call the 'objective' and 'subjective' 'factors' (the material object, that is, and the nature of the sense organ), upon which the dualist must hold its causation to depend. Hence he supposes that if the dualist could maintain that the perception of blue was caused by a blue object *alone*, and did not depend at all upon the sense-organ, then the object really might be blue; but that, since the perception does depend upon the state of the sense-organ, the quality perceived cannot possibly belong to the other supposed contributory cause. To this it need only be replied that there is no reason whatever to suppose that the object of a perception must be exactly similar to its cause; and that consequently the supposed difficulty in the dualistic position is no difficulty whatever.

As for the second argument, it is a very familiar objection to Dualism; and yet, here too, the difficulty seems to vanish as soon as we try to define it precisely. The words used will cover two quite separate arguments, both of which Herr Cornelius states quite distinctly, though he does not seem to be aware how distinct they are. (1) The first, which is that which he urges against the causation of sensations by material facts, consists simply in the familiar assertion that the causation of a mental fact by anything so utterly different from it as a material fact is 'unintelligible'. Yet if we consider what that causal relation is, which is all that the Dualist is bound to assert as holding between them, there seems to be nothing whatever in its nature to render it either 'unintelligible' or impossible that it should hold between two completely different kinds of fact. The relation asserted is merely that, whenever a certain group of material facts, A, exists, there will also exist, in a definite temporal relation to A, a certain mental fact B; so that from the mere existence of A, the existence of B, at a position in time having the given temporal relation to that at which A existed, can always be inferred. That such a relation should hold between an A and a B, which are entirely unlike in quality, is a perfectly 'intelligible' supposition; we can see what the supposition means; it appears to contain no intrinsic impossibility: and hence there would seem no reason why the question, whether the relation *does* so hold or not, should not be decided by an inductive investigation, of exactly the same kind as that by which we commonly decide whether a given fact is or is not the cause of another. Herr Cornelius's objection seems so far to be merely based upon the old prejudice that an effect must be similar to its cause. But (2) the second argument, which he urges against the supposition that a

material change can be 'caused' by a mental fact, has certainly a greater plausibility; and it is perhaps largely due to confusion with it that the first argument is so often used. It consists in the equally familiar plea that, according to the Dualist (and the man of science), every material change has a complete cause in some previous group of material facts; and that hence none can be caused by a mental fact. The plausibility of this plea seems to rest upon a real ambiguity in the word 'cause,' which leads us to suppose that a given effect can have but one 'complete cause'. We use the word not only (*a*) in the sense just given, to mean any fact or group of facts on which the effect always follows, and which, therefore, is sufficient by itself to justify us in inferring it: we also may mean by it (*b*) the whole of the facts existing at any given time, without the existence of which the effect would not have followed. Now if we use 'cause' in the second of these senses it really does follow that any given effect can have but one cause at any given time; and hence that, if every material event has a material cause, none can possibly have a mental one also. And hence, I think, we are apt to suppose that one effect cannot have two simultaneous causes in the first sense either. Our tendency thus to confuse the two meanings of cause, and to suppose that whatever is a cause in sense (*a*) is also a cause in sense (*b*) is increased by the fact that any *material* group which is a cause in sense (*a*) really is the only *material* group, existing at that time, which *is* in this sense a cause of the given effect: among material facts it is true that when we have found a group, upon which the effect always follows, this group must include the whole of the *material* facts existing at that time, without which the effect would not have followed; it seems that a given effect really cannot have two simultaneous *material* causes. Yet I cannot see that the second conception of cause has any necessary connexion with the first. There seems no reason why there should not be two (or more) simultaneous groups of facts, from *each* of which, by itself, the existence of a given effect may be inferred with certainty, and which are therefore, each, its 'complete cause' in sense (*a*); although, at the same time, since they always accompany one another, the effect would never occur, if only one of the two had preceded it. To put the point generally: It seems quite plain that each of two premisses may, by itself, imply a given conclusion, although, at the same time, the premisses mutually imply one another. In any case we may urge that Herr Cornelius has established no objection to Naturalistic Dualism by this argument, unless it can be shown *either* that the Dualist must hold *more* than that for every material event there is a group of material facts, upon the existence of which it will always follow, *or else* that this supposition is incompatible with his further contention that for some material events there is *also* a mental fact or group of facts, having to the events in question precisely this same relation which, by the supposition, some material group has to them.

I conclude, therefore, that none of Herr Cornelius's arguments

have any tendency to support his view that matter does not exist objectively. But that view might possibly be a just one notwithstanding; and in order to consider whether there is any probability of its being so, it will be well briefly to notice some other consequences of that main position upon which he relies for a confirmation of it.

We have seen that Herr Cornelius identifies the conception of 'objective existence' with the conception of a 'regular connexion between our perceptions'; and that, by this identification, he becomes guilty of a gross inconsistency, since he also holds that there is a sense of 'objective existence' in which matter does *not* exist objectively. But this is not the only inconsistency of which he is guilty, in so holding; for, whereas he infers from his identification that *matter* does *not* exist objectively in any other sense than that our perceptions are regularly connected, he admits that *other minds* may exist objectively in some other sense. With regard to other minds he holds, in fact, not that they do not exist objectively, but merely that we cannot *know* whether they do or not. "Science is," he says, "as wholly unable to give a decisive answer to the question whether other minds exist or not, as to the question whether we shall continue to live after our death" (p. 322). The 'solipsistic' view can never be refuted 'empirically' (p. 323), that is to say, by what Herr Cornelius holds to be the only valid philosophical method. In short, Herr Cornelius's position is that we can know nothing but our own perceptions and the 'regular connexions' between them: "in the knowledge of these regular connexions," he says, "consists all that we know and ever can know of the world of things except the immediately given appearances themselves" (p. 271). From this position he infers, as we have seen, in the case of matter, that it does not exist objectively, and, in the case of other minds, that we cannot know them to do so. That the first inference is wholly unjustifiable is obvious. And if, as I shall hope to show, the second, though it follows from its premiss, yet contradicts the supposition that we know that premiss; if, as will then appear, our knowledge of the existence of other minds is as certain as our knowledge that we know our own perceptions; then certainly the position that we not only can, but do, know the objective existence of matter, will appear in a not unfavourable light.

Herr Cornelius holds, we have seen, that the existence of other minds is wholly inaccessible to 'empirical' and 'scientific' proof. But he has apparently failed to observe that the premiss, from which he correctly infers this conclusion, a premiss which he does claim to have proved empirically and scientifically, is that *we* know nothing but our own perceptions: that *several* minds, at least, and not one only, are in this awkward position. Now this is a proposition which, if it were true, Herr Cornelius himself could not possibly know, since his own is one of the minds which know nothing but their own perceptions. He holds, in fact, the two

mutually contradictory propositions: (1) It can be proved scientifically that several minds exist and know only their own perceptions; (2) It cannot be proved scientifically that any mind exists except one. In order to avoid this contradiction, he might perhaps allege (though the allegation is plainly contrary to the facts) that when he says, '*We* only know our own perceptions,' he is speaking loosely and really means only '*I*, and other minds like mine, *if* there are any'. But even if this allegation were true, he would still be guilty of an equally grave inconsistency. For, as we have seen, the method by which he professes to prove that he only knows his own perceptions is the method of genetic psychology: that is to say, he infers it *from what happened to other minds than his own*, before he existed. Hence, if it cannot be proved scientifically that other minds existed, the premisses of his own conclusions are propositions which cannot be proved scientifically; and consequently the whole of his conclusions, including the proposition that he only knows his own perceptions and the proposition that the existence of other minds cannot be proved scientifically, are themselves as uncertain as the existence of a future life.

It is plain, then, that the existence of a plurality of minds must be at least as certain as any theory about the nature of *our* knowledge. Any theory of knowledge which casts a doubt upon our knowledge of the existence of other minds, thereby destroys its own credit; for, if it proves that the existence of these is doubtful, it proves that it is itself doubtful in an equal degree. That is to say, our knowledge that other minds exist is at least as certain as our knowledge that *we* know our own perceptions. But to grant this is to grant that I can know, with this same certainty, that certain things exist objectively, even when I do not perceive them. And if it must be thus consistent with any true theory of knowledge, that I should know this with regard to other minds; then plainly, so far as the theory of knowledge is concerned, it must be equally possible that I should know it with regard to material things. The same false theory of knowledge, which leads Herr Cornelius to deny that matter exists unperceived, would lead him, with equal reason, to deny that theory of knowledge itself.

I have dwelt at such length upon the above points, because they appear to form the main thesis of the book. It is upon introducing the student to these doctrines—to his method of 'empirical analysis of psychical facts' and to his conclusions that we know nothing but the regular connexion of our own perceptions and that matter exists objectively in no other sense—that Herr Cornelius seems to think that the usefulness of his book mainly depends. And certainly, but for these cardinal doctrines, almost every detail in the book would appear in a very different light from that in which he presents it. It would seem, therefore, that no criticism of the book could well be so pertinent as the proof that these very doctrines involve us in the grossest inconsistencies.

There is, indeed, one other discussion in the book, which it would

have been well, for similar reasons, to consider at length. This is the discussion of causal laws and their justification—that 'orderly connexion' of which we have heard so much. For a 'clear insight' into this subject Herr Cornelius acknowledges our indebtedness to Kirchoff and Mach. But even to state clearly in what this 'clear insight' consists, would require almost as much space as I have already occupied

To 'Dogmatic' Idealism Herr Cornelius's objections may be briefly indicated.

To its 'Rationalistic' form they are in the main two, which follow naturally enough from his position, namely (1) that Rationalists deny the reality of our sensations—depreciate the 'sensational' element in knowledge; and (2) that they maintain the objective existence of other things in the same sense in which the Materialist maintains that of matter.

To the 'Sensualists,' on the other hand, his main objection is that they overlook the existence of 'thought'—that is to say, the knowledge of *relations between* sensations, as distinguished from the mere sensations themselves; and that hence they deny those 'regular connexions,' which constitute our knowledge of 'objective existence'. It is in bringing out this distinction between sensations and the relations between them—in pointing out, for instance, that to have two like sensations is not the same thing as knowing that they are like—that the best part of his work consists.

G. E. MOORE.

Kant. Sechzehn Vorlesungen gehalten an der Berliner Universität. Von GEORG SIMMEL. Leipzig: Duncker & Humblot, 1904.

SINCE the publication of the late Dr. Adamson's *Shaw Fellowship Lectures*, in 1879, there has appeared no more suggestive book of like compass on the Philosophy of Kant than this excellent little volume of Prof. Simmel's. It consists in substance, though with many additions and expansions, of a course of lectures, delivered at Berlin in the Winter-semester of 1902-3, to which students of all faculties were invited. The author expresses the hope that it may serve as an introduction to philosophical thinking generally. Whether the Kantian system was a happy selection for this purpose is open to doubt, but Prof. Simmel has, at all events, produced a work that will be of considerable help to those who are not new to the subject and are able to appreciate a fresh and original treatment of it. The plan he has adopted is as follows. After two lectures dealing with the characteristics of Kant's *Weltanschauung* as a whole, and its relation to empiricism on the one hand and abstract rationalism on the other, five lectures are devoted to a discussion of the Critical theory of knowledge, the main features of which are presented in an order of sequence somewhat different

from Kant's own, which hitherto has been almost invariably adhered to by his expositors. Then come seven lectures on the fundamental conceptions of the Kantian Ethics, which are unfolded in an instructive and interesting way and subjected, at the same time, to some acute and forcible criticism. A further lecture is occupied with the leading principles of Kant's analysis of the apprehension of beauty, and in a concluding lecture an attempt is made to estimate the significance of the Kantian mode of thought in reference to what is called the "new individualism" of the latter part of the nineteenth century.

Prof. Simmel lays stress, at the outset, upon the distinctive trait of intellectualism running through the whole of Kant's philosophising, and upon his prevailing tendency to treat the norms which are valid for thought as valid also in every department of human life. Whilst feeling and volition receive from him due recognition as factors of the finite mind, their worth and value are regarded as solely dependent upon their conformity to the conditions of logical consistency. The Critical Philosophy is perhaps the most perfect example in history of an endeavour to carry out the work of speculation through strict observance of the laws of the game. Kant never wavers as to the supreme position of reason in experience, never hesitates in his belief that the problems which reason sets for itself must have a solution in terms of reason, even though we may be compelled to reject *in toto* that transcendent use of the categories, which ordinary intelligence too readily makes. And, as Prof. Simmel justly observes, the doctrine of the "primacy" of the practical consciousness, rightly interpreted, is quite in keeping with the general drift of Kant's reflexion. For the "postulates of the practical reason" are not arbitrarily assumed hypotheses, conjured up to meet the needs of some ultra-rational faith, but assumptions necessarily demanded by reason itself in the effort to conceive the possibility of even an approximating realisation of the moral end. It is, that is to say, a logical necessity which compels us to represent the realm of reality in such wise that it shall afford scope for the mode of action characteristic of a rational being, of a being, namely, capable of determining its conduct solely on grounds of reason.

Kant's epistemological inquiries group themselves round the determination of the conditions of objectivity in Knowledge, and Prof. Simmel has followed a sound method of exegesis in formulating the fundamental question at the start. Unless this be done, the student is apt to lose his way in the midst of the numerous preliminary considerations by means of which Kant approaches his central problem. Our author's rendering of the Kantian solution of the problem may perhaps be gathered from the following passage: "When we are framing a sentence, we apprehend the words, no one of which conveys the meaning in itself, as related to one another, as belonging together, and in this unity the mere material of the words, without any quantitative change, ac-

quires the form of the sentence, etc. In short, what we call form is, from the point of view of the function it subserves, the unification of the material; it is the overcoming of the isolated *Fürsichsein* of the several parts, the whole of which parts, as a unity composed of the parts and transcending them, is now opposed to other unformed or differently formed material. Such is the essential connexion in which Kant, by analysing the perceived world into material and form, can finally discern in the unities, which are constituted out of the multiplicity of the given data, the point of reference for all recognition of such world. A given manifold of sense, of imagination, of thought, becomes a fact of knowledge by being formed, that is, unified, by growing together into a consistent meaning. It is this unification that first creates out of the material in question an *objective* image. The sensations produced by sunshine and the feelings of warmth that follow them are, as such, events that occur one after another in my subjective consciousness only, and in so far do not yet yield anything in the way of knowledge. When, however, the judgment ensues, the sunshine is the cause of the warmth, then the two notions contained therein have passed out of a mere succession and have entered into a unity, one unifying process holds them together,—and, precisely on that account, they are objectified, and, instead of the contingent play of my sensations, a real relation of elements has supervened, which is independent of all that is merely subjective" (38-39). The vital point in the "Deduction of the Categories" is here well and tersely put; the gist of the Kantian argument consists no doubt in ascribing to conjunction or synthesis the function of producing that peculiar component in the object, which constitutes it, apart from its special concrete filling, an object at all. But it is perhaps even more important to make clear the particular kind of synthesis involved than to lay stress upon the consideration that synthesis of some sort is indispensable. I cannot avoid the impression that Prof. Simmel's mode of interpretation indicates far too mechanical a process to do justice to Kant's conception, although it is true the analogy used in the above extract ought to have been a safeguard in this respect. Synthesis, namely, in Kant's sense, is just as little a mere bringing together of parts as the meaning of a sentence is an aggregate of the words that compose it; the parts of the manifold in the act of apprehending are one thing, the parts of the object apprehended quite another. By no combination of parts not in themselves involving the unity of knowledge could there, on the Kantian theory, be given to the whole which might thus be constituted that unity which is the characteristic mark of the object known. The synthesis, in other words, which Kant had in mind, is itself the very act of knowing, and the bringing of that synthesis to notions is, as he expresses it, the work of the understanding. Prof. Simmel seems to discover in the reciprocally determined relation of the parts themselves a sufficient explanation of objectivity. "Objectifying signifies," he

says, "the fixing and securing" of the diffused materials of sense, and the materials of sense mutually guarantee this 'fixing and securing' by virtue of their unification (40). For Kant, however, that which steadies, or gives stability to, the wandering manifold of possible intuition is surely the universal and necessary character of the *a priori* factors implicated in the synthesis. The *Gegenüberstellung* of that which is known, its *Entfernung*, to use Prof. Simmel's phrase, from that which knows, whereby it is independent of the accidents of our subjectivity and our will (42), Kant would attribute to those universal rules or necessary laws, which are the ways in which thought is aware of its own unity in the act of combining a manifold. In contrast to the changing mental states of the finite subject, the object assumes a position of permanence, because the features in it, constituting its objectivity, are the correlate or counterpart of that permanent transcendental self, which is the ultimate ground of experience generally. That the object *stands over against* the finite subject means, then, that in the process of knowing the finite subject is under a *constraint*, and that knowledge on its part is only possible through conformity to the conditions of *Bewusstsein überhaupt*.

It is but to put what has just been said in a slightly different manner to assert that, according to Kant, universality and necessity are not the consequences of connectedness in phenomena, but that conversely connectedness in phenomena is the consequence of universality and necessity. Prof. Simmel appears to lend his countenance to the former of these alternatives, and to think that in doing so he is following in the footsteps of Kant. Kant, he points out, relinquishes the hope of finding a principle of unity in some ultimate metaphysical reality, be it matter, spirit, substance or what not, and in so doing strikes out a new path for philosophy. So soon as the principle of unity is sought, not in the unapproachable inner being of things, but in the systematic representation of them which scientific knowledge enables us to attain, and in the context of an experience which attests itself as valid—then, it presents itself, not indeed as a completely realised fact, but as a reliable form or scheme, which our growing insight is constantly filling up with detail, and which serves as an ideal even where gaps and errors obscure our view. The spiritual essence, which Plato hypostatised into a rigid metaphysical substance over against the unwillingly recognised realm of sensuous existences, manifests itself to Kant as the *system* of natural laws and of the phenomena which they render intelligible. Thereby the world is no doubt intellectualised but not engulfed in subjectivity. There can be no more objective standpoint than that which looks upon reality as identical with scientific truth. It is not any representation to consciousness but that only which has stood the test of intellectual scrutiny and established its validity as a necessary part of experience which takes the place for Kant of being, in the naïve or metaphysical sense of the word. For science, indeed, nothing is necessary in

and for itself; a thing is necessary only through its regular connexion with something else, whose reality is admitted, this again is necessary only through the former or through a third thing with which it is regularly connected, and so on *ad infinitum*. So conceived, all experience is, as Kant expressed it, an "Inbegriff"; there is only one experience the parts of which are so united as to form a self-consistent whole; there is only one way in which the nature of things can be intellectualised and included in the fabric of a valid experience, a cosmos not of existence but of knowledge (73-79). With a good deal of what I have thus imperfectly summarised there is no occasion to quarrel. But the underlying assumption on which it proceeds, that the transcendental self is a mere formal unity, the meeting place simply of the elements of the knowable world, seems to me to be carried by Prof. Simmel to an extreme, from which Kant himself would have recoiled, and with which it is impossible to reconcile the more constructive portions of the *Critique of Pure Reason*. That assumption leads Prof. Simmel to throw the whole weight of reality upon the side of the empirical elements. Yet no one has insisted with more thoroughness than Kant that the raw material of intuition, unqualified by thought, is just as much an abstraction as are the pure notions of the understanding, unqualified by sense. If the transcendental self is unreal apart from the multiplicity of phenomena, so is the multiplicity of phenomena apart from the transcendental self. In attempting, then, to disentangle the contributions of each to the concrete whole of experience, no purpose is served by a too rigid insistence on the literal meaning of "form". "Formal" gets its significance for Kant as antithetical to "material"; no further implication of "mere potentiality" attaches to it than attaches also to its correlative. The careful expositor of Kant has here to steer his course between Scylla and Charybdis, between hypostatising the pure ego into an entity fully organised and equipped with faculties, and thinning it away to a mere "Punkt, in dem alle Elemente der Erkenntniswelt sich treffen" (75). That Kant himself failed in this undertaking must be conceded, but his failure did not result in his reverting to a phenomenalism framed upon the model of Hume's. Self-consciousness remained for him the ground of the phenomenal world and its categories constitutive features therein.

I can only briefly allude to one or two of the many suggestive lines of reflexion followed by Prof. Simmel in discussing the ethical doctrines of Kant. He argues (101), with much cogency, that the categorical imperative furnishes only a negative and not a positive criterion for practical conduct. If it be granted that the principle of every immoral action, when thought of as a universal law, is beset with inherent contradiction, it does not follow, on that account, that a principle of action which is self-consistent is morally necessary. In fact, the criterion of self-consistency is altogether without significance unless an idea, event or condition

is already presupposed as morally valid. That the individual may end his life at his own discretion I cannot will should become a universal law, because such a law would involve the ceasing to be of nature. But if I am a pessimist and look upon nature as an evil, then suicide is in no sense a self-contradiction. Moreover, even with the proviso above mentioned, the criterion, contends Prof. Simmel (105), is absolutely unavailing for the numerous situations where particular interests and obligations conflict, since we can never know *a priori* which are the elements the principle of our action in regard to which should be universalised, and which are the elements that are negligible as of no moral bearing. Accordingly there remains no other mode of applying the criterion than that of taking the whole of the circumstances into consideration and, with them all in view, to ask whether we could will a specific action as a universal norm. No answer, however, could be obtained to this question that would furnish any ground for moral decision. Either it would appear that other consequences would follow than in my individual case (as, for instance, where it might be morally justifiable for one person to take a risk upon himself which it would be morally unjustifiable for a number of persons to do), and then no universal law could be framed, or else that the consequences of similar actions on the part of all would be exactly similar, and then the universal law would give no further guidance than could be derived from my individual case as such. Prof. Simmel holds that the insufficiency of the categorical imperative thus brought to light indicates what is perhaps the deepest moral problem of our time. Since the individuality of the agent has come to claim for itself a wider range of determination than Kant recognised and to treat any formal moral principle as indefinitely elastic and variable, the question arises whether it is not an error to require that a rational agent should always seek to conform his conduct to a general law. Whilst such a law cannot altogether be dispensed with if there is to be any objective ground of morality at all, modern life is reaching forward, he thinks, towards what for Kant would have been a *contradictio in adjecto*, the conception, namely, of a law that shall be essentially valid for the individual as such, the expression of that idea of the mutual furthering of personal individuality which has gradually taken the place of the eighteenth century idea of equality. The qualitative character which Kant ascribed to the moral will, its unconditional antithesis to everything that is aimless, subjective, capricious, must, indeed, still remain intact; the authority, the dignity, the necessity, all, therefore, which is included under the notion of worth, must still be comprised in those particularisations of the general law which responsible personalities fashion for themselves.

Prof. Simmel goes on to discuss the Kantian conception of "pleasure" (116 *sqq.*), and has much to say that deserves attention upon the attempt to reconcile the opposition between duty and

happiness through the "entirely new category," appearing at the end of the *Critique of Practical Reason*, of "des Glückes würdig zu sein" (120 *sqq.*). He handles, also, with courage and skill, the problem of freedom, and the regulative significance of the ideas of God and immortality (125 *sqq.*). Finally, in the brief but suggestive treatment of the faculty of æsthetic judgment (155 *sqq.*), the author develops the dictum that æsthetic enjoyment of an object is wholly independent of the existence of the latter, a consideration often lost sight of by commentators of Kant, but one that perhaps admits of more far-reaching consequences than are apparent on the surface.

It is curious, though explicable, that Prof. Simmel should bring his book to a conclusion without any reference to the second part of the *Critique of Judgment*. Apart from the teleological principle and the attempted reconciliation of mechanism and freedom, the Kantian edifice is left standing incomplete, and certainly the full bearing of the whole system cannot be gauged. If Prof. Simmel should some day supply the missing sections he would increase the value of an exceedingly useful work, which might profitably be translated into English. And may one venture also to add that a good index and table of contents would assist the progress of the reader?

G. DAWES HICKS.

Adolescence : Its Psychology and Its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion and Education. By G. STANLEY HALL, Ph.D., LL.D., President of Clark University and Professor of Psychology and Pedagogy. New York : Appleton, 1904. Vol. i., pp. xx, 589 ; vol. ii., pp. vi, 784.

PROF. STANLEY HALL calls this work his first book, and, in a technical sense, it may be ; but his name is so well known among all the exponents and students of Child-Study throughout the civilised world that the statement brings with it for a moment a shock of surprise.

We remember his many papers, his interesting monographs, the collected German edition of his essays on Child-Study, and, above all, his constant stimulus, suggestiveness and encouragement to the work to which he is devoted and which owes so much to him. He now increases our obligation by a big book on Adolescence, a term which seems to have a wider meaning in America than in England, since all problems of birth, growth and development from the dawn of life to maturity seem to find a place.

Perhaps the first feeling of the English reader is astonishment at the widely spread interest which, in America, enables such a work to be written and published. Merely to count the names of

the American men and women whose researches have been quoted or drawn upon would be a formidable task. And such a publication, with any hope of success, implies a considerable public with interest in and capacity for sociological problems. In England such a book could not have been written, the materials which constitute it are not in existence, and to us it will serve as a valuable storehouse of fact, statistical and other, on most of the many problems involved in birth and growth. To me, therefore, it seems unfortunate that the author should spend time in emphasising his differences with modern philosophy. It is all epistemology now, psychology has no longer a soul, be it my task to bring in "genetic ideas of the soul" which shall be "new both in matter and method". Thus, in effect, the author. He echoes the dictum of the practical man to whom a philosopher is a person who lives apart from humanity and so knows nothing of real life. This criticism reads strangely to those who know that the development of philosophy in England has, for some time, been predominantly practical, and that its extension in that direction is largely due to the epistemological bias which the writer deprecates.

Psychology cannot be "broad enough to include all the philosophic disciplines," though every philosophy has its psychological side. And is not what might be called the bias of child-study more marked than is desirable? All of us are prone to value highly what we are personally most interested in, and it often happens that the psychologist of the primitive comes to value the immature and naïve simply for the sake of its immaturity.

"Our consciousness is a late, partial, and perhaps essentially abnormal and remedial outcrop of the great underlying life of man-soul. The animal, savage and child-soul, can never be studied by introspection. Moreover, with missing-links and extinct ethnic types, much, perhaps most, soul-life has been hopelessly lost." It is now Prof. Hall who is depriving us of soul, though it is rarely conceived as specially characteristic of "missing links".

Nor need the author be closely followed in his antagonism to introspection. No experimental results can be truer than the units in which they are calculated, and correct and fertile units involve analysis and introspection of the highest order. Experimental work is often itself introspection under definitely assignable external conditions, and only by an analysed and projected self can we hope to understand the psychology of other minds. Some workers are more competent in the intensive treatment of individual problems, others do better work on a large scale with units more roughly conceived; but such various workers are really complementary and not antagonistic, though they sometimes dislike each other. But perhaps Prof. Hall would readily admit all this, and only wishes to guard us against putting ourselves, in too literal a fashion, in other people's places,—a process as dangerous psychologically as it is doubtful ethically.

There is, I think, some confusion between the normal and the

normative. It is very necessary indeed that we should know by careful observation and measurement what are the normal figures of our growing population. But we must not, having struck our average, straightway announce to all and sundry, like the automatic weighing machines, that that is what they *ought* to weigh.

The undue stress on the efferency of all mental process favours the view that education should be mainly concerned with making and doing, an ultra-Froebellianism which in England is largely discredited, and which has, by a backward wave, discredited the psychology from which it sprang. Activity—the purposive solution of problems however simple—is doubtless the key-note of all mental life, but mental activity is often hindered, not helped, by bodily activity. The error is parallel to that which defines attention as an adjustment of sense organs, and is even more dangerous educationally.

Prof. Hall thinks that the early training of children is not, in many ways, mechanical and dogmatic enough; he holds the race-recapitulation theory with logic which Spencer missed. But, in a few pages farther on, we are told that American education "by dogma and hyper-sophistication tends to exterminate the naïve which is the glory of childhood". I was puzzled for a moment by the apparent contradiction, but I have long been of opinion that the dogmatic and the rational have each been both overdone and insufficiently done, at any rate, in English education. With us, roundabout, elaborate, highly rationalised and exhausting methods are adopted to teach English reading and spelling. Precious hours are wasted in junior classes in trying, and naturally failing, to teach the theory of arithmetic before allowing the children to do sums. On the other hand, a foreign language must be taught parrot-fashion, and a definite logic cease to be required in geometry. So that the apparent contradiction of the writer forces most valuably into prominence a question which the pedagogy of the immediate future must face. It must cease talking vaguely of mechanical and intelligent, and tell us where, exactly, intelligence and where, exactly, mechanism are in place.

Prof. Hall thinks that science and theology should cease to stand apart and should rather complement each other, that clergymen should not suspect the study of nature; and he is optimistic about the world, because, being an evolutionist, he holds that the best must prevail. The theologian has some excuse in modern times, if not to suspect the scientist as such, at least to suspect the scientist turned philosopher, for the latter strives to prove the complete inutility of the theologian's studies; and it was not a theologian who said:—

> Are God and Nature then at strife
> That Nature lends such evil dreams?

Now, doubtless, evolution has acquired its great popular fame by the vague promise which it seemed to contain that things would be

all right by-and-by. But, except in popular literature, is there any justification for this? The fittest survive, doubtless; but fittest for what? The answer is: For survival under given conditions. But has this not, both in human and in animal life, often implied degradation? And even Mr. Spencer, who sometimes does write in language which leads the unwary to deify evolution, speaks of retrogression and dissolution as inevitable. And, on Prof. Hall's own showing, optimism needs a brave heart, since, as he says, "There is not only arrest but perversion at every stage, and hoodlumism, juvenile crime and secret vice seem not only increasing, but develop in earlier years in every civilised land".

Prof. Hall gives copious extracts; he quotes, in full, figures and opinions on every side of the question he is discussing, and sometimes himself seems to veer round in accordance with the particular piece of work he is considering. This makes the chapters very long, and one is sometimes tempted to wish that the writer had presented us with conclusions rather than summaries. But in the present state of anthropology the course he has adopted is better, for the book remains of value even to those who differ from the majority of the propositions advanced; for Prof. Hall quotes frankly and freely against the views which, one feels, he holds himself. 'Judicial summings-up' can be left till later.

From a long chapter on "Growth in Height and Weight" we learn that the higher the species, the more rapid, relatively, is the transit through the lower stages, but this is, of course, simply a corollary from the doctrine of evolution plus recapitulation; and that women more nearly attain the stature of men among savages than among civilised races. Our athletic young ladies with free-swinging limbs and beautiful, clear, penetrating, loud voices (as Mr. H. G. Wells describes them), may, after all, be a reversion. Further, we are told that growth and work, whilst mutually helpful up to a point, become antagonistic beyond it; that growth proceeds in steps, so to speak, and not in a gradual ascent; that genesis and individuation beyond a certain point are in inverse ratio. Clearly we cannot ultimately push individual growth beyond the possible procreation point. And of the other dicta, though profoundly interesting, it can hardly be said that they are new. We have now to determine more definitely the limits of their application. As an interesting detail I might mention that the London County Council minor scholars are larger, age for age, than the American children.

In another chapter on "Parts and Organs during Adolescence," the author says that a very great number of the craniological measurements sometimes insisted on seem, at present, little more than an affectation. With this opinion I cordially agree, and have had occasion to remark the same with reference to the entrance examination to schools for the mentally defective.

A serious discussion as to exactly what is implied by precocity would have added value to this section of the work. It is not

enough to use the term, as we all do, to condemn any early growth which we dislike. "Each lower level must have its full development, for it is the necessary condition for the unfoldment of the higher." This is conclusive against precocity were it true, but it makes the rapid transit dictum rather hard to understand and completely neglects evolution by atrophy. It may be, of course, that we ought to seek to reverse nature's steps, but an optimistic evolutionist can hardly hold that view.

Again, in this section we have a pregnant saying on that little-considered subject—the antagonism between individual development and heredity. "If the reproductive parts are subnormal, race deterioration is certain, no matter how complete in other respects individual development may be." These warnings come opportunely at a time when an American President fulminates against race suicide, and are not without use in London where the birth rate shows a marked and continuous decline. Perhaps the most questionable thing in this chapter is the assumption that acquired traits are hereditary; it should at least, in the present state of knowledge, be treated as an open question.

Another chapter contains many interesting observations on the growth of "Motor Power and Function". "Muscle Culture develops brain centres as nothing else yet demonstrably does." This is said with a view to claiming a place in education for muscular training; but does it not prove too much, and how is it itself demonstrated? And which brain centres does it develop? And at what expense to the others? These are questions to be answered, but not to be answered by a mere assertion of the supremacy of muscle culture as mental pabulum. The whole chapter to me is marred by an ultra-physical view. We must, we are told, cultivate all movements to which there is any spontaneity in order to avoid the atrophy of disease. But may not we have atrophy without disease? And why should these movements not atrophy unless we need them and desire them? Why should we exercise all the muscles of the body? Only, it seems to me, for reasons of utility or æsthetics and not simply because we happen to be born with them. Nor should I have thought that Prof. Hall would have adopted this view, as he is in sharp antagonism to Prof. Groos's theory of play, which activity he regards, as I do, as biologically recapitulatory rather than anticipatory. There is, too, a danger that a theory of Inhibition, couched in imagery too physiological, may be harmful to the psychological concept which it purports to explain. Inhibition, as we all know from personal experience and analysis, is not a mere drafting off of energy by employment in other ways. It is positive and not merely negative. Let us but for one moment relax attention and let our minds wander and straightway the inhibited thought or action flashes into being.

It is useful to be reminded that man's "various organs and functions are evolving or retrograding to some extent independently of each other" It is this fact which gives whatever value

there may be in a faculty psychology, and makes a psychology based on a unitary soul or subject so formal and unfertile.

In his treatment of "Juvenile Faults," Prof. Hall seems to be oscillating between a belief in repression and one in indulgence, but, doubtless, this arises from the highly comprehensive treatment which the subject receives. I select one valuable sentence for quotation.

"Although pedagogues make vast claims for the moralising effect of schooling, I cannot find a single criminologist who is satisfied, whilst most bring the severest indictments against it for the blind and ignorant assumption that the three R's or any merely intellectual training can moralise."

Mr. Spencer, from the standpoint of analytical psychology, said this long ago, and the steady increase of juvenile crime with popular education supports the judgment.

Chapter xvi. is of special interest to all those who wish education to be something more than a codification of rule of thumb precepts handed down by tradition. Prof. Hall thinks that it is of little educational value to know "the name of a spade in several different tongues"; that the "ghost (of grammar) now lacks just the quality of logic which made and besouled it"; that "in modern pedagogy there is an increased tyranny of things, a growing neglect or exclusion of all that is unseen"; that the modern American school is producing a "lapse toward infantile or animal picture-thinking"; that, quoting the Chicago work, "rote memory is most powerful in the ablest school pupils"; that, quoting from Mr. Sadler's Reports, "nothing is more striking to the English visitor in American high schools than the comparatively elementary nature of the work done in the highest form". Prof. Hall concludes a striking and vigorous chapter by claiming, as finally necessary to a good education, some instruction in general philosophy which should give an account of life looked at in its broadest issues. He seems to have in mind something like what Mr. J. B. Crozier has when he speaks of the History of the Evolution of Civilisation.

One more section, and one only, can be referred to here, a most valuable chapter on "Adolescent Girls and their Education". The upshot of the whole matter is that college graduates, men and women, are so deficient in offspring that, were the up-keep of the population left to them, the American would soon disappear. Many of us, who embraced family limitation to raise quality where quantity was unnecessary, find the basis of our hope cut away by the studies on single children and small families which, it seems, differ unfavourably in quality as well as in quantity, when compared with large ones.

And finally, I can only say that I have spent many hours in delighted perusal of these large volumes, and that no one who values sociological studies on the side of Child-Study can fail to find them of very great value.

W. H. Winch.

Geistige Strömungen der Gegenwart: Der Grundbegriffe der Gegenwart, dritte umgearbeitete Auflage. Von RUDOLF EUCKEN. Leipzig: Veit & Company, 1904. Pp. 398.

THE *Grundbegriffe der Gegenwart* was published as long ago as 1878. Historical exposition formed the substance of this work; but in the second edition (1893), and still more in the present volume, everything else is subordinated to the advocacy of the author's philosophical convictions, which have meantime been ripening and bringing him into more conscious and energetic opposition to the German philosophy of to-day and the ideal of culture it represents. He is able to speak with satisfaction of the many friends his books have brought him, and of the sure consciousness he has of being in spiritual contact with the age, especially as expressed in the younger generation. He now prefers to speak of spiritual currents or tendencies rather than of concepts, to avoid the impression that he is dealing with purely intellectual processes or content with their decision. He conveniently escapes much criticism through a conception of the function of philosophy which enables him to dispense to a large extent with the necessity for grounds and proofs, since he reduces it to a symbolical expression of the Truth analogous to Religion, and incapable of expressing in concepts anything beyond the merest outline, which must be filled in with the help of artistic phantasy and creative intuition (p. 341). Where *real* problems are being discussed, he says, it is not logical or dialectical ability that triumphs, but the power of the spiritual concentration, the vital energies welling up in them. In all questions of principle and their consequences, each one is ultimately defending his own spiritual species; whence alone the power, warmth, passion of intellectual movements (pp. 57, 58). Thought is in general a living force only as a fragment, an expression of a new stage of life (p. 95). There is a world-historical Apperception, and no widening of knowledge apart from a widening of the sphere of human activity. Our knowledge has not made the world clearer, and it stands under such peculiar conditions that we are not justified in regarding it as absolute (p. 116). Intellectualism has erred in treating the life of man's spirit as the life of absolute spirit, and in reducing the world to the unfolding of a Cosmic Logic, with all the attendant shirking of the dark and inimical in the state of the world, with the sacrifice of the individual to the universal, of content to form. For the life of the spirit can in no wise be understood as a mere clarification of something active in external reality, or Nature reduced to a mere lower degree of the life of the human spirit. The contrast between Nature and the spirit of man lies within the life of the spirit. Prof. Eucken considers that his "deviation from dogmatic Spiritualism consists only in this recognition of two different points of departure, two working-points within the comprehending whole. . . . The life of man's spirit appears more incomplete, more involved in a struggle up-

wards. Man is summoned to act and decide for himself, he has to co-operate in the movement of the universe, not merely to arrange it in his thoughts. Not the intellectual, but the ethical becomes thereby the kernel of his striving" (pp. 180, 271). The movement in which he co-operates is that of a conversion of reality to its own inner life, the coming to itself of the world-process, the achievement of a being and a meaning as opposed to all the senseless contexture of relations and preservation of microscopic selves (p. 329). Prof. Eucken's *Lebenssystem* establishes Spirituality ultimately in an intelligible world transcending all human existence. This is the supreme power supporting and uniting all reality, and the constantly active source of the life of the human spirit. In part a mere continuation and portion of Nature, man at the same time exhibits new forces, ends and forms which combine to introduce a new Being opposed to everything that is mere Nature. Action resulting from free decision unites itself to that which is merely happening to him. If there is no such superhuman, supramundane spirit then empirical existence, with its chain of rigid necessity, is the only truth and the life of the spirit an illusion. To share in the life of the spirit means to share in a world-life raised above the opposition between subject and object, requiring nothing to complete it. There has to be a gathering together of life to a unity beyond the individual psychical activities, and a transference of the centre of gravity to this unity, so that these activities, directed upon the whole, lead to the evolution of a substantial life. Then there unfolds itself a universal activity working through these psychical activities and proclaiming itself in them, which forms an all-comprehending *Lebensraum* in which the manifold may meet and enter into relation, but which in itself unfolds a constant being and maintains it during all change of activity. Here man is not something added to the world, but in this deep ground he has his share: *Die Selbstbildung wird hier unmittelbar Weltbildung sein* (246-247). The division between subject and object is first overcome to some extent where that we undertake as our work becomes our vocation, a part of our being; and more fully in the stage of creation and of love. But the soul desires more complete independence in a life whose content and goal lies in its own realisation. In this the unity does not stand alongside things and fashion them for its own peculiar purposes: it belongs to the very nature of the things and brings them to perfection. The spiritual life knows itself to be at once the basis and presupposition as well as the goal and climax of the world-process. The chief endeavour of the spiritual life, then, is the attainment of Truth, and the more reality of existence the more Truth. The search for Truth is not the search for a knowledge of the world, but the pursuit of self-knowledge by the life of the spirit. The knowledge of Truth is bound up with the process of that life itself, giving it an historical character. The measure of life is here the measure of knowledge.

I believe that Prof. Eucken would accept the above, allowing for the unavoidable disadvantages of over-condensation, as a fairly accurate epitome of his *Welt- und Lebensanschauung.* That is not such a Heaven-born inspiration as some appear to think. When Schelling, in 1841, attacked Hegel's philosophy as incapable of entering into the relation with absolute reality demanded above all by religious faith, and sought to replace it by yearning and the act of will corresponding to a practical, personal necessity, he may be said to have started a powerful undercurrent of philosophical reflexion which has never lacked striking exponents. We know that Kierkegaard attended these lectures and glowed with enthusiasm when Schelling spoke of "Reality". From him streams an influence, potent in literature and not entirely negligible in philosophy, which certainly reaches down to Nietzsche and to Eucken. Eucken has Kierkegaard's insistence upon "*wesentliche Erkenntnis,*" upon the inwardness of morality, upon the ethical all-importance of the individual. He shares his refusal to see any parallel between natural and spiritual evolution, opposing equally an irreconcilable "*entweder-oder*" to all smooth dialectical progression. He has with Nietzsche his disregard of historical and social considerations, at least to some extent. There are many and important points of difference, of course; but we may say that in Eucken a spirit akin to Kierkegaard and Nietzsche has become mellowed, patient and persuasive: at times even a little tame and rhetorical. As a critic of culture Prof. Eucken approaches the Nietzsche of the first period very closely. It is History, he says, that robs us of the power to fashion our own lives by estranging us from our own thoughts and responsibility through ceaselessly occupying us with things foreign to us: giving us learned knowledge for life. Nevertheless it is indispensable as a means of inter-subjective union, enabling the inner life to front the endless world encircling it so overpoweringly (p. 259). Mere social culture lies on the periphery of the life of the spirit: *Eine blosse Menschen- und Massenkultur echte Geisteskultur weit zurückdrängt* (p. 299). Great personalities are the masters, not the servants, of their age, who raise the life of the spirit out of a shadowy existence as merely universal concepts to full reality, characteristic unity and visible form, by bringing summations of energy into definite directions and forcing historical movements into individual paths (p. 297) For its origination the life of the spirit must have individuals, for its fixation society. Moreover, if in culture man is not to hang just any self-spun thoughts on to an alien reality, and so with his whole striving fall into emptiness, then the grounding of culture in an independent life of the spirit is indispensable. Good and True could never be absolute requirements if the whole movement took place in man himself and bore the impress of his specific features. The greatest of all emancipations is the emancipation of life from the merely human (pp. 243-244).

Prof. Eucken is always interesting as a critic, but he is too much

a man of one idea, and that idea extremely difficult to render even moderately intelligible. The independent life of the spirit is dinned into our ears on every second page, and yet I have sought in vain for anything like a *deduction* of the idea itself. Moreover, Prof. Eucken admits the difficulty of giving to the concept of a world-nature in man any very precise expression. Artistic creation furnishes for him the type of what he means. There we have a mutual interpenetration of subjective and objective in the soul of the artist, things receiving a soul and the artistic life a content. And he quotes with approval the saying of Goethe that in such a synthesis of world and spirit we have "*Die seligste Versicherung der ewigen Harmonie des Daseins*". Can that, he asks, which in Art is an incontestable reality not be true of the life of the spirit as a whole? This is a fine saying, but I did not know that Prof. Eucken was prepared to admit *die ewige Harmonie des Daseins*. According to him the given world is not merely not an evolution of the spirit, but opposed to it, the recognition of this fact marking the passage from philosophy to metaphysic (p. 104). How this opposition came about he nowhere explains, even symbolically; but all true spiritual life involves such a metaphysic, since it evolves itself, not merely in superiority, but in opposition to the world. Surely this is something Goethe would not have accepted. In fact, I do not grasp what Prof. Eucken intends us to understand by the relation of the independent life of the spirit, of which we hear so much, to the divided realm of Nature and Humanity. Is it as much in opposition to Nature as is the spirit of man? If so we are left with an absolutely hopeless dualism. If not the opposition of Nature to the human spirit must be due somehow to our imperfect relation to it, and we should not allow our imperfection to load it with hard epithets. Again is the independent spirit fully expressed, or susceptible of complete expression, in these differences? So far as I understand Eucken, the present world is not merely chaotic, but imperfect. There is a sort of descent of the Holy Ghost on the spirit of man to supply *his* deficiencies, but Nature is left to go on its way in brute opposition if not active antagonism to man. Now, what is meant by saying, that man's appropriation of things raises them to their own true perfection, if they are inherently imperfect? All talk about bringing forth the soul of things is merely figurative. Man's power to modify Nature does not extend very far on this earth, and certainly does not reach beyond it. Their soul could only be drawn forth by the same power that is increasing its revelation to man's spirit; the progressive creation of a new reality would in fact be a movement in the whole substantiality of spirit affecting the human spirit and Nature at one and the same time, and rather a fresh apprehension than a free appropriation by man: an effect, and not a cause. Prof. Eucken insists very strongly on man's freedom, while at the same time he distinguishes his position from Indeterminism. Man's spontaneity is not his deepest nature; he finds a content in

a world of actuality within which he has to understand his freedom. He is a contexture of freedom and necessity. Freedom is not of the individual points, but of the whole. It is the culminating point of an all-penetrating endeavour (pp. 372-375). Just so, it is, in fact, made up of the mechanism of Nature and the compulsion of spirit. To share in the life of the spirit, he says, is to have a fully active life, raised above every opposition, and bearing in itself the draught of an independent reality, towards the completion of which every movement is directed (p. 96). To be in earnest with the idea of a world still in process of creation, Prof. Eucken would require, it seems to me, to regard the spirit, not as having the independent, superhuman, supramundane life he claims, but as having sundered itself, once for all, into fundamental differentiations which are now in time finding their way back to that relation to one another whereby the unity which once existed for itself should exist for them. Something, perhaps a good deal, could be said for such a view; but Theistic prejudices forbid Prof. Eucken from imagining, as did Kierkegaard, that God himself is still in process, with a Being as yet incomplete. Prof. Eucken's creation of that which already exists in all possible fulness of perfection, however it may serve to fill up man's time, even if it were possible, certainly appears to be quite unnecessary. In fact, either the independence of the spirit is an illusion, or the process of creation a mere appearance.

DAVID MORRISON.

The Platonic Conception of Immortality and its Connexion with the Theory of Ideas. By R. K. GAYE, M.A., Fellow of Trinity College, Cambridge. Cambridge: University Press, 1904.

THIS Essay, we learn from the-title page, obtained the Hare Prize in 1903, and it is, as we should expect, a contribution to that interpretation of Plato which prevails in the University of Cambridge. There can be no question that Cambridge has deserved well of Plato in more ways than one. In particular, Cambridge men have insisted that Plato had a coherent metaphysical system, and that, in the course of his long life, he developed and modified that system in some important points. Every one who takes his Plato seriously —and the number of such is happily growing—must feel that these two positions are sound. The trouble only begins when we try to formulate the metaphysics of Plato and to interpret the dialogues in the light of that. This is not the place for a statement or criticism of Dr. Jackson's views. They may be right or they may be wrong; but the fact remains that no other authority on Plato has yet been able to find in the dialogues the system or systems which Dr. Jackson finds there. Now, in the present Essay, Mr. Gaye adopts most of the conclusions of Dr. Jackson and Mr. Archer

Hind, and he tells us (p. vii.) that he has been "content to presume them". He is, of course, quite entitled to do so; but it gives an esoteric character to the whole discussion, and makes it very hard for any one who does not accept his premisses to estimate it fairly. It is surely time that the adherents of the Cambridge school of Platonic interpretation should show themselves more ready διδόναι καὶ δέχεσθαι λόγον. As it is, we get various applications of the fundamental hypothesis; but, if you ask any questions about that, σεμνῶς πάνυ σιγᾷ. We are confined to an examination of the hypothesis itself in the light of τὰ συμβαίνοντα, which is good Platonic method, and it will be seen that the conclusions of Mr. Gaye are such as to suggest the need for a change in the ὑπόθεσις itself.

It is unnecessary to discuss the first six chapters in detail. It is common ground that the doctrine of the immortality of the disembodied soul was first proclaimed by Plat Any one who doubts this need only be referred to Rohde's *Psyche*. It is also common ground that this doctrine finds its fullest expression in the *Phaedo*, though I am quite unconvinced that the *Phaedo* is later in date than the *Republic*. The importance of this to Mr. Gaye's argument is that, according to him, by the time the *Phaedo* was written, though the *existence* of the ideas has never been doubted, "the possibility at least of our ever *knowing* them has been called in question" (p. 86). Plato's interest in the doctrine at this stage is, then, that it gives the philosopher his only chance of ever laying hold of true being. It will be noted that Mr. Gaye rejects Mr. Archer Hind's view that by the words χωρὶς σωμάτων (*Phd.* 76 C) Plato "simply means apart from the human bodies in which they now dwell". He maintains on the contrary (p. 97) "that the words mean exactly what they say, namely, that philosophic souls live on after death 'without bodies altogether'". This is a very old controversy, and the Church was quite as shocked by the doctrine as some modern Platonists have been.[1] In 114 C ἄνευ καμάτων was read for ἄνευ σωμάτων as early as the time of Eusebius in the interests of orthodoxy. But we shall see that Mr. Gaye makes Plato recant his heresy later.

In chapter vii. we come face to face with the main question "whether it is possible to discover a later theory of soul in conformity with the Later Theory of Ideas"[2] (p. 115). "What is required," we are told, "is to apply Dr. Jackson's results in another sphere and see how they will affect a side of Plato's philosophy to which they have not hitherto been extended" (p. 116). If "the idea is in reality an eternal mode of the thought of a supreme Mind—a νόημα θεοῦ, as we may call it," what will follow as to immortality? The result is startling. The particular soul must always be attached to a body. "Attachment to a body is, as it were, the price which soul has to pay for differentiation" (p.

[1] *Cf.* O. Immisch, *Philologische Studien*, ii., pp. 78 *sqq.*

[2] The use of capital letters here is instructive.

153). Finally, in the *Laws*, the Athenian Stranger "finds that what we mean by ψυχή is a particular kind of κίνησις," and we are told that this "supplements what we have already learnt from the *Timaeus*, where we are told that the οὐσία, or actual existence, of ψυχή is dependent on σῶμα; apart from σῶμα, ψυχή is merely a λόγος or abstract conception".

Here we must pause. Students of the *Timaeus* will have no difficulty in recollecting passages which say almost the exact opposite of this; they will hardly recollect this one. And, indeed, it is not there, though there is something like it in Mr. Archer Hind's translation. In *Tim.* 51 C, Plato asks:—

ἀλλὰ μάτην ἑκάστοτε εἶναί τί φαμεν εἶδος ἑκάστου νοητόν, τὸ δὲ οὐδὲν ἄρ' ἦν πλὴν λόγος;

This is correctly rendered by Stallbaum (*quum tamen id nihil sit nisi vana oratio et verba inania?*) and by Martin (*Est-ce fausse-ment que nous disons toujours qu'à chacun d'eux correspond une espèce intelligible, et ne seraient-ce là que de vaines paroles?*). The question is rhetorical. No Greek scholar ought to be in doubt for a moment as to the meaning of τὸ δὲ οὐδὲν ἄρ' ἦν πλὴν λόγος, and no Platonist should hesitate for a moment to answer the question by Παντὸς μᾶλλον διϊσχυριστέον εἶναί τι εἶδος ἑκάστου νοητόν. Mr. Archer Hind, however, translates "whereas it was nothing but a conception," and tells us in his note that "the question is in fact between Sokraticism and Platonism; that is to say, between conceptualism and idealism". The word λόγος has always been a stumbling-block in the interpretation of Greek philosophy.

But the greatest wave is still to come. Mr. Gaye has satisfied himself that the individual soul is always attached to a body in later Platonism, and that its immortality consists simply in its permanence through a series of transmigrations into the bodies of different animals. How will this square with the "Later Theory of Ideas," which is, as we know, "a theory of natural kinds"? Mr. Gaye asks, "What happens when a human soul, for instance, at its next incarnation enters into some other animal form? It would seem that such a soul must in such circumstances cease to represent one idea and begin to represent another" (p. 221). Mr. Gaye has only a tentative answer to this ἀπορία. It is to the effect that "Νοῦς thinks man-life and pig-life, but it does not determine itself directly into man-souls and pig-souls, but simply into souls". I do not find this very helpful, and it is not pretended that Plato says anything of the sort, so I will not discuss it.

The real merit of Mr. Gaye's Essay is that he does not conceal these difficulties, but states them boldly. I am not sufficiently at home in the atmosphere of the "Later Theory of Ideas" to have thought of this last and greatest ἀπορία for myself. It is, after all, most useful that those who are initiated should work out the theory to its logical results; but it is certain that, if the συμβαίνοντα continue to be of this character, the rest of us will be encouraged to attack the ὑπόθεσις itself.

JOHN BURNET.

IX.—NEW BOOKS.

An Introduction to Systematic Philosophy. By WALTER T. MARVIN, Ph.D., Assistant Professor of Philosophy in Western Reserve University. New York and London: The Macmillan Co. Pp. xvi, 572.

THIS is an interesting and very well-written volume; but its various parts are of unequal value.

Stating his entire agreement with the first chapter of Münsterberg's *Psychology and Life*, the author expresses his general point of view as follows: "I should call the main doctrine of my book a rationalistic idealism. By idealism I mean the doctrine that denies the existence of a transcendent world, and that, therefore, limits all problems to the world of experience. By rationalism I mean that our attempt to interpret the world must presuppose premisses or *a priori* truths about the world. Against naturalism I maintain that man's ideals can rightly lay claim to the same validity as his science; and in behalf of naturalism I attempt to justify the atomic mechanical interpretation of nature and indirectly of mind" (Pref., p. viii.). The course of treatment is subdivided as follows: Part I., Metaphysics: i., Philosophy of Nature (chaps. ii.-xiii.); ii., Philosophy of Mind (chaps. xiv.-xx.); iii., Ontology (chaps. xxi.-xxv., materialism, spiritualism, dualism and the problem of substance); iv., Cosmology (chaps. xxvi.-xxxi., pluralism, singularism, causation, panpsychism); v., Cosmogony (chaps. xxxii.-xxxv., creation, evolution, teleology). Part II., Theory of Knowledge: i., Nature of Knowledge (chaps. xxxvi.-xl.); ii., Validity of Knowledge (chaps. xli., xlii.); iii., The World as Pre-supposed in Knowledge (chaps. xliii.-xlvii.); iv., The Manifold Interpretation of the World (chap. xlviii.). Part III., The Philosophy of Religion (chaps. xlix.-li.). Part IV., Theoretical Ethics (chaps. lii., liii.). Part V., Æsthetics (chap. liv.). It will be seen that the book is excessively subdivided. The weakest part of the work consists of the first two divisions (chaps. ii.-xx.) of "Part I.". These chapters are more likely to be perplexing and confusing than helpful to the beginner. The other parts of the book seem much more useful from the point of view of an "Introduction".

The centre of the difficulties that I find in Mr. Marvin's "Philosophy of Nature" consists in the position—whatever it may be—that he assigns to the mechanical theory. He admirably states the essentials of this theory and accepts it (with the implied finality of the distinction between primary and secondary qualities) as ultimate for science. This invites comparison with Lotze's position; but Lotze, professing to allow full validity to mechanism, cuts the ground from under it by his theory of the ideality of Space. The reader is left to guess what Mr. Marvin's view of Space really may be. Throughout these chapters the author seems to be alternately making and withdrawing concessions to mechanism, and the final result is uncertain. He does not directly deal with

the primary difficulty to be met by any one who holds to the primacy of mechanism: that the "actual concrete world" is neither described nor explained by the mathematico-mechanical theory. It is certain that we come to a complete stop when chemical affinity and secondary qualities are recognised as real; and there is no hint of how these may be explained or described in *merely* mechanical terms. The Conservation of Energy is treated as equivalent to the conservation of motion; but no explicit treatment is given of the conception of Energy itself. The extremely important subject of chapter xii. (Mathematics and Abstract Mechanics as *a priori* Sciences) should have had much fuller treatment; and the references given for reading are absurdly inadequate. I fear it must be said that Mr. Marvin's whole account gives not even the beginnings of an accurate idea of the present position of physical and mathematical science. Philosophers seem hardly to have realised the important fact that some of the ablest special workers in these branches of knowledge—Russell, Couturat, Ostwald, Duhem, Poincaré, to mention only these—have begun to devote themselves with concentrated energy to discussion of the epistemological and "methodological" aspects of the conceptions with which they have such an intimate practical acquaintance; and when compared with this work, what has hitherto passed for "Philosophy of Nature" seems really almost ridiculous.

We repeat however with pleasure, that the other portions of Mr. Marvin's book are well done, and introduce the reader skilfully to some of the most important philosophical problems of the present time.

S. H. Mellone.

Notes on German Schools. By W. H. Winch. Longmans, Green & Co., 1904. Pp. 264.

This book on German Schools is written by one of His Majesty's Inspectors and is a good attempt to use the comparative method in order to facilitate improvement in the teaching processes. It does not claim to be an exhaustive treatise on German Education, but it has a distinct value of its own because the writer has confined himself to a definite task which he was well qualified to perform, and which he has taken pains to perform thoroughly. The book consists of two parts. The first sixty pages give some of the writer's general impressions on German Education, and a concise statement of the main facts regarding schools, teachers, methods and curricula as they presented themselves to the eye of an educational expert whose experience enabled him to compare them with the corresponding facts in the English system. The second part consists of a well-arranged and admirable series of notes of separate lessons on the chief school subjects given in schools of different types, and in classes of different grades.

These lessons illustrate the practical procedure adopted in the typical schools visited by Mr. Winch, in the teaching of Arithmetic, Reading, Writing, History, Geography, Grammar, Foreign Languages, Object Lessons and Science,. Drawing, Physical Exercises and Singing. The special features of the method are in each case noted, and the author occasionally adds a word of criticism or makes a comparison with English methods.

It is interesting to find that as a rule object lessons as given in German Schools are not lessons in perception at all, but lessons in language, and that the teaching of Drawing and Elementary Science seems to be decidedly inferior to the teaching in England. The German teacher is

so thoroughly trained in the oral method of Question and Answer that he has reduced his procedure almost to a fine art, but he carries the method so far that all lessons tend to become mere exercises in language rather than progressive steps in the acquirement of knowledge and mental power. Our English methods at their best seem to be more effective in developing self-reliance and initiative—qualities which make good colonists and organisers. The German school-boy requires the continuous help of the teacher, the English school-boy is encouraged and expected to work alone.

Mr. Winch suggests that the abolition of individual examination in this country and the increase in oral teaching are tending to reduce the power of the average English boy to do things by himself. This would be a lamentable result of a wise reform, but surely it is not a necessary result.

It is a great matter that Mr. Winch is still able to say "that the English school-boy, both primary and secondary, is much more intellectually independent and can work better without the perpetual prompting and questioning of the teacher".

Just as a series of good photographs gives us a clearer idea of a geographical district than a long description, so the lucid and concise notes of lessons and teaching methods here arranged in order will enable many to realise the work of German schools and teachers almost as well as if they had visited the country themselves. The book will be found a real guide to the best practical methods of teaching.

JOHN EDGAR.

The Diseases of Society (The Vice and Crime Problem). By G. FRANK LYDSTON, M.D., Professor of Criminal Anthropology, Chicago, Kent College of Law, etc. Philadelphia and London: J. B. Lippincott Company, 1904. Pp. 626. Price 15s. net.

In this volume the author gives a somewhat generalised exposition of current ideas on vice and crime. The opening chapters on Social Pathology and the application of Evolution in relation to Criminal Sociology and Anthropology rely rather too much on "atavism" in the loose sense. A distinction is indicated, but not pressed home, between "degenerate" and "atavistic". Strictly, to say that a criminal propensity of any specific kind is atavistic is merely to say that a quality that appeared in the grandfather reappears in the grandson, but that is not in any sense an explanation. It had some explanatory significance so long as individual acquisitions were assumed to be transmitted; it has little or none now that the biologist looks on the somatic individual as simply a test sample of what the stirp may become. Consequently, these chapters and the whole volume so far as founded on this somewhat easy theory, are not convincing. But the practical parts of the book are lucidly written and show the sobriety of opinion that comes of extended experience. And the experience is American. The chapter on Anarchy in its Relations to Crime seems to include most of the criticisms made on the weak points of democratic administration in general and American democracy in particular. The suggested remedies include anti-trust law, intelligent selection of police officials, increased municipalisation of goods, regulation of immigration, etc. The sections on prostitution contain little that is new, but omit little that is accepted knowledge. The falling birth rate is met by this: "Better a single child, properly reared by a happy, contented mother, than a dozen ill-fed, unkempt, dirty, vicious

and half-baked hoodlums" (p. 361). The criticism of the conventional method of punishing crime and preventing prostitution is trenchant and on the whole persuasive. "The sexuality of the male has more to do with the primal cause of prostitution than has the degeneracy of the female" (p. 373). The practical hints on the treatment of sexual vice and crime are good. The chapter on Genius and Degeneracy contains many facts well arranged, but the authenticating references are rather few. A large number of photographs after the Bertillon method are the basis of a long chapter on the characteristics of the criminal. These photographs are excellent so far as they go, but a "control" series is wanted from absolutely normal persons, if there be any such. An indication of the author's "therapeutics of social disease" is that he regards the Elmira Reformatory as the "nearest approach to the ideal".

W. Leslie Mackenzie.

The Science of Peace: An Attempt at an Exposition of the First Principles of the Science of the Self (Adhyâtma-vidyâ). By Bhagavân Dâs. London and Benares: Theosophical Publishing Society, 1904. Pp. 347.

This is the second instalment of a "scheme of metaphysic" by a Vedântist (approximately, Pantheist), the first part having been published in 1900 as *The Science of the Emotions*. The author's style is lucid, vigorous and fascinating, and his tone modest and sympathetic. He has had the advantage, as he acknowledges, of suggestions from Dr. J. H. Stirling and Prof. J. E. McTaggart. The book is thrown into the form of the pilgrimage of a human mind from the restless miseries of perplexity and fear at the problems of existence to the realisation of his identity with the Absolute. This, as is well known, is the solution that has most largely availed to satisfy the Indian mind during some 1,500 years and more. The main interest in its re-telling to-day lies in the fact that the tellers have absorbed, with the inherited facility of ancient civilisations, a considerable amount of modern European philosophy, and eagerly turn it to account. The less strongly trained intellects read any or all of it that appeals to them into their own ancient literature. The more discerning draw interesting comparisons. Mr. Dâs is among the latter. His chapter on Fichte and Hegel should prove as suggestive to English readers as to his fellow-countrymen. He holds that the former philosopher is virtually, if independently, in striking agreement with much of his own Adyvaita-Vedânta doctrine. We ask—Where then is Spinoza, who is only named in a note? It is possible that the accident of words, of language, the power of which bulks so large in this, as in all mystic philosophies, may have obscured, for one writer at least, the parallelisms between the two great Pantheistic systems. We cannot imagine Spinoza dwelling in austere rapture on the identity between his Self and the Absolute Self. And the evolution of the term 'Absolute' is post-Spinozistic. But if this Vedântist writer were to read, for 'Deus,' not 'Self,' with its odious ethical implications, but his own 'Atman,' akin in sense, derivation and æsthetic effect to Pneuma, he might have tarried long over the *Ethica*. But let him not hope, at this time of day, to attract the European mind by the childish esotericism of mystic symbols of sounds. We have at least got beyond the 'OM' stage of meditation. Neither Greek nor Buddhist tolerated it. Nor is it worthy of an alert intelligence like that of the author.

C. A. F. Rhys Davids.

An Introductory Study of Ethics. By W. Fite. New York and London: Longmans, Green & Co., 1903. Pp. xi, 383.

This little book is written rather as a guide to conduct, than as a contribution to moral theory. Ethics is defined as "a study of practical life in its more general aspects". Temperamentally, men fall into two classes, the one desiring an ideal manhood and the interests of humanity, the other desiring happiness or contentment and following self-interest. Ethical theories, accordingly, may be grouped under the two headings of Hedonism and Idealism; though there are, in fact, as many theoretical half-way houses as there are compromises in the individual character.

Hedonism, now, offers a clear, but relatively narrow, idealism, a relatively comprehensive but vague conception of the self and of social relations. There is, however, no necessary contradiction between clearness and comprehensiveness. From the metaphysical point of view, indeed, the two opposing theories are found to be complementary: if we generalise hedonism, it takes on an idealistic flavour; if we clarify idealism, it takes on an hedonistic meaning. More important for the author's purpose is the thesis that the two attitudes are not even incompatible in practice; the concluding chapters of the book seek to reconcile them in the statement that "the demands of morality are best satisfied by a course of behaviour regulated with a view to the maximum of sustained progress". The terms of this maxim are carefully defined, and its application is illustrated in a number of concrete cases.

The moralist by profession will hardly be satisfied with Mr. Fite's classifications. And even for the undergraduate student, and the 'thoughtful persons whose attitude towards philosophy is one of serious interest, yet at the same time somewhat sceptical,' the author has, in the reviewer's judgment, erred on the side of over-simplification. He should have borne in mind more constantly his own introductory statement that "the extreme positions are very rarely held".

P. E. Winter.

Psychology: An Account of the Principal Mental Phenomena, with Numerous Examples. By A. Cook. New York: Hinds, Noble & Eldredge, 1904. Pp. xi, 386.

This book may be described as a collection of anecdotes, interspersed with careless and often inaccurate statements about psychology. The skin and muscles give rise to three kinds of sensation: pain, heat, and resistance or pressure (p. 1). Having assimilated this fact, we are warned (p. 3) that "feelings the opposite of these are included in the designations". Pleasure, then, becomes a sensation derived from skin and muscle; so does the opposite of resistance or pressure—whatever that may be. On page 10 it is stated that "as we have said, we taste nothing but sour and salt, bitter and sweet". This, however, has not before been said. Gems of style abound. "We, of a truth, with our vast quantities of sugar and sweetmeats, live in what was to primæval man the sweet by-and-by"; "Oysters know very little as it is: what would they know without some means of sensation?"; "Primarily, the conditions of memory are: (1) The person himself; (2) his circumstances; and (3) things in general"; "Handel's 'Messiah,' a musical epic, has been considered the best oratorio ever wrought out in the brain of man, the manuscript of which in the hand of the composer is still to be seen in Buckingham Palace"; "Other things than landscapes call out feelings of the picturesque, for example, cathedrals, markets, the character of a man and his style".

E. B. T.

Historische Untersuchungen über Kant's Prolegomena. Von BENNO ERDMANN. Halle a. S.: Niemeyer, 1904. Pp. 144.

Most students of Kant are acquainted with Prof. Erdmann's edition of the text of the *Prolegomena* published in 1878. In an elaborate Introduction, the editor sought to establish the view that the treatise in its present form was the result of a twofold "Redaction" on the part of its author, and believed himself able to distinguish the sections to be ascribed to each. In consequence of repeated complaints about the difficulty and obscurity attaching to the mode of writing followed in his chief work, Kant, according to this view, resolved, soon after the appearance of the *Critique* in 1781, to prepare a popular presentation of the main principles of his philosophy. The project, however, was never carried out; apparently not so much as a commencement was made. After a few months it was dropped in favour of another scheme, that, namely, of composing a short compendium or abstract of his system, "for the use, not of pupils, but of future teachers". The fulfilment of this latter design had almost reached completion when the Garve-Feder review of the *Critique* appeared anonymously in the Göttingen *Gelehrte Anzeigen* of 19th January, 1782. Then Kant became aware of the extent to which a misconstruction of his philosophical position was possible, and the discovery led to a further change of plan with respect to the little volume upon which he was engaged, as also to a corresponding remodelling of the sections he had ready for publication. By the end of August, 1782, the *Prolegomena* was substantially *druckfertig*, although it was not given to the public until the middle of the year 1783.

Such very briefly was Erdmann's theory of the way in which the *Prolegomena*, as we now have it, came to be written. In editing the text, he printed those passages which he regarded as the later insertions and additions, together with such as appeared to him to have been composed after the change of plan in January, 1782, in smaller type than the rest. The principal sections thus indicated were the whole of the preface, 3, parts of 4 and 5, the three *Anmerkungen* to 13, 27, 28, 29, 30, 31, 39, and everything after and including 57. Erdmann's theory gave rise in Germany to a good deal of discussion. It was disputed notably in an able Essay (which appeared originally in the *Altpreussische Monatsschrift*, xvi., 1, and was afterwards republished separately) by Dr. Emil Arnoldt, who contended that the alleged composite character of the *Prolegomena* could not be maintained on the ground either of internal or external evidence. Erdmann did not reply at the time, but after an interval of twenty-five years he has recently had occasion to go into the matter again by reason of the task entrusted to him of editing the *Prolegomena* for the Berlin Academy edition of Kant's Collected Works. The present monograph contains the result of his renewed investigation.

So far as the internal evidence is concerned, the author does not consider it necessary to undertake any fresh examination of the text. With a few minor modifications he adheres to the analysis made by him in 1878. He is here occupied almost exclusively with the external evidence, the materials of which have been greatly enriched by the three valuable volumes of Kant's Correspondence which Rudolf Reicke has edited for the Berlin Academy Edition. A further source of information made use of is the Correspondence of Hamann, particularly the letters addressed during the years 1781-1783 to Herder and to Hartknoch, then Kant's publisher. Erdmann does not claim, even now, to be in possession of a conclusive proof, but he is of opinion that the additional material supports and confirms his hypothesis to such a degree

that it may fairly be regarded as established. The evidence presented is, in fact, cumulative in character. All the passages bearing upon the subject in the sources mentioned are quoted and commented upon in three laborious chapters dealing respectively with Kant's original plan of a popular exposition of the doctrines of the *Critique*, with his later idea of issuing a short *Auszug*, and with the subsequent remodelling of the latter into the *Prolegomena*. Altogether, Prof. Erdmann's case seems a strong one, and he has, at all events, given us an interesting piece of original research throwing not a little light upon the line of thought that was occupying Kant's mind in the period between the appearance of the first and second editions of the *Critique*.

Incidentally, the author attempts to show from the Correspondence that in the *Erläuterungen* of Schulze, published in 1784, no portion of any unfinished work of Kant, done whilst the idea of a popular exposition was contemplated by him, could have been incorporated, as was suggested by Arnoldt in the Essay above referred to. Further, in an Appendix, Erdmann discusses and rejects the supposition of Vaihinger that an accidental misplacement of some pages of Kant's manuscript by the printer has occurred at the beginning of the *Prolegomena*, whereby a part of the passage dealing with mathematical judgments, together with the whole passage dealing with metaphysical judgments, has been transferred to § 4, although evidently belonging to the end of § 2. This appears to us the weakest portion of Erdmann's book, and Vaihinger's reply to his objection in the *Kantstudien* (ix., 539 *sqq.*) is certainly deserving of the reader's notice.

The perusal of this volume has occasioned in us a feeling of regret that Prof. Erdmann did not reproduce, in the *Anmerkungen* to the fourth volume of the Berlin Academy edition, the full text of the Göttingen review, so difficult now to obtain a sight of. This document, unimportant enough in itself, is indispensable for tracing the sequence of thought which led to the revisions in the second edition of the *Critique*, and to have made it accessible to Kantian students would have increased the value to them of the great undertaking now being carried out with such scholarly care and thoroughness.

G. Dawes Hicks.

Die buddhistische Philosophie in ihrer geschichtlichen Entwicklung. Erster Teil: die philosophische Grundlage des älteren Buddhismus. Von Prof. Dr. Max Walleser. Heidelberg: Carl Winter's *Universitätsbuchhandlung*, 1904. Pp. 148.

It is to be regretted that this interesting and suggestive little work should have been cast in its present form. It consists partly in an attempt, formidable enough even to matured Indologists, to establish identities and historical sequences between ancient works in the Buddhist literatures of India, Ceylon, China, Japan and Tibet, partly in an inquiry into how far Buddhism, as revealed in its canonical and semi-canonical books, can be said to amount to a systematic philosophy. The testing measures applied are the attitude of Buddhist thought towards the problems of external reality, of the nature of the ego, and of personal responsibility as affecting future existence (commonly called Karma). It is evident that the *Grundlage* of any great movement of thought cannot be exhausted by these three inquiries, especially where, as in the present case, the documentary evidence is exceptionally rich. The theory of external perception is by no means the fundamental touchstone of ancient philosophising. This, however, cannot be maintained as emphatically

with respect to early Indian thought as it can be of Greece. The theory is felt after in the utterances attributed to the founder of Buddhism, not to say in records of an even earlier date. And the extraordinary acuteness of Buddhist thought for psychological analysis may well have conduced, as it did with modern British philosophy, to an earlier evolution of this particular problem. But early Indian thought was, like its Western sister, as much occupied with the question of the One and the Many. 'What is the One?' occurs more than once as a dialectic poser. And whereas the more generally favoured philosophy, opposed by Buddhism, was even then making for that *Advaita* (non-dual) pantheism elaborated later on as Vedântism, Buddhism, from its more inductive and agnostic standpoint, dared to stop short at its analysis into a plurality of ultimate elements, and hereon to base its ideals of perfect insight, mental emancipation and altruistic devotion. Nor is any inquiry into Buddhist philosophy complete which glides over the remarkable pendant it affords to the slightly earlier or slightly later Heracleitean doctrine of all existence as process or becoming. Or again does scant justice to its emphatically reiterated affirmations of the law of causation as natural, universal and eternal.

The doctrine of the ego, on the other hand, is unquestionably the central point of early Indian speculation, and the author's section on the very remarkably Hume-istic stand taken with regard to it by Buddhism, which is good as far as it goes, might well have been enlarged, especially in the direction of comparative treatment. For the canonical books are rich in criticisms of contemporary speculation on the self or soul, with which the age was teeming, and which abound in early non-Buddhistic literature. The limited space, however, to which the author has confined himself, added to the limited number of years during which he has specialised in philosophical history, have made it almost inevitable, in spite of his already remarkable erudition, that this first instalment of results should take the form, if not the title, of Prolegomena to a treatise on Buddhist philosophy. It is indeed better so, and *du reste* the work, as it is, is for Indologists a significant and promising symptom.

C. A. F. Rhys Davids.

Der Gegenstand der Erkenntnis. Einführung in die Transzendentalphilosophie. Von H. Rickert, Professor an der Universität Freiburg in Breisgau. Zweite verbesserte und erweiterte Ausgabe. Tübingen und Leipzig: Verlag von J. C. B. Mohr (Paul Siebeck), 1904. Pp. viii, 244.

It would be difficult to speak too highly of Prof. Rickert's little work. It is probably as vigorous and subtle an exposition of the fundamental doctrine of neo-Kantian epistemology as is to be found anywhere, and, though necessarily largely polemical, is in all matters of taste and temper a model of what cultivated criticism should be. Just at the present moment, with 'Pragmatism' so much in the air, the re-issue of such a work in an improved edition is singularly opportune. For Prof. Rickert's position is very much of the nature of a compromise between the extreme doctrines of the Pragmatist and the Anti-pragmatist. On the one hand he strenuously upholds the "primacy of the practical reason," and his second chapter ("*Der Standpunkt der Immanenz*") may fairly be said to be fatal to the old realistic conception of truth as a copy of an extra-conscious reality, if any one still holds to that ancient formula. While in the third chapter (to my mind the best of the five into which the book is divided) it is shown by examination of the logical character of the judg-

ment that truth and reality really mean the system of judgments which we find ourselves under an *obligation* to affirm. Thus the author agrees with Pragmatism in finding the criterion of truth in a subjective *feeling* of necessity, and in putting *das Sollen* before *das Sein* in the logical order of concepts. At the same time he does not forget that what Kantianism maintains is the primacy of the practical *reason*, and no part of his book is more excellently executed than the refutation of the "relativist" denial of the existence of "absolute" truth. For the rest Prof. Rickert is in the main an orthodox Kantian, and as such will not allow that the validity of transcendent norms of judgment is any ground for the recognition of transcendent objects. All objects, in fact, are merely "contents of consciousness," and, therefore, purely "immanent"; the "immanence-philosophy" is only wrong because it proceeds to deny the reality of the transcendent norm. It follows that there can be no science of Metaphysics as distinct from *Erkenntnistheorie*. I own myself in doubt whether Prof. Rickert's argument is not affected by his acquiescence in an ambiguous term. Is any known object really adequately described as a '*Bewusstseins inhalt*'? But I must not attempt a criticism which want of space would necessarily render inadequate of a piece of work it would be impertinence to treat perfunctorily.

A. E. TAYLOR.

Kants Rassentheorie und ihre bleibende Bedeutung. Ein Nachtrag zur Kant-Gedächtnisfeier. Von Dr. THEODOR ELSENHANS, Privatdozent der Philosophie in Heidelberg. Leipzig: W. Engelmann, 1904. Pp. 52.

This is a useful little monograph on Kant's treatment of the race problem and his attitude in regard to the theory of Evolution. Much of the material had, it is true, been previously gathered together by Fritz Schultze, to whose work on *Kant und Darwin*, published in 1875, Dr. Elsenhans, strange to say, makes no allusion. Still, there was ample room for a further study of a group of Kantian writings that hitherto have had but scant justice done to them. After discussing Kant's work as a scientific investigator generally, and especially his contributions to Anthropology, which he raised for the first time in Germany to the position of an independent discipline, the author considers in detail Kant's view of development, the significance he attached to the conception of "race," his theory of the origin of different races, and his notion of purpose or design in relation to the theory of races and to natural science in general. The Kantian Essays specially referred to are those entitled "On the Different Races of Men" (1775), "Determination of the Notion of a Human Race" (1785), and "On the Employment of Teleological Principles in Philosophy" (1788), all of them prior to the third *Critique* (1790), whilst the latter and the Lectures on Physical Geography (1822) are freely drawn upon for passages relevant to the subjects under consideration. Dr. Elsenhans endeavours to indicate how nearly Kant approached to modern doctrines, and thinks that were it not for the absence of such terms as "natural selection," "inheritance," etc., the fact would be perfectly obvious. The author is content, with one exception, to play the *rôle* of expositor. The only criticism attempted has reference to the necessity of conceiving life as the "limiting notion of mechanical explanation". Kant, it is contended, was not sufficiently in earnest with his dictum that in the interpretation of nature the mechanical explanation should be carried to the utmost extent of its availability. Otherwise he would have seen that the limit to mechanical explanation was not the border-line between the inorganic and the organic, but the

original arrangement of elements from which the world process as a whole is the outcome. In other words, if teleological principles are to be admitted at all, they must be valid for the universe in its entirety, and not confined to one department of it.

G. Dawes Hicks.

Das Seelenleben des Kindes. Ausgewählte Vorlsungen von Karl Groos. Berlin : Reuther und Reichardt ; London : Williams & Norgate, 1904. Pp. 229.

This series of lectures, written in more or less popular form, offers what the author modestly describes as "glimpses" into child-psychology. The first and more general part deals with the current conceptions of the definition, scope, purpose and methods of the comparative study of childhood (pp. 1-72). In the second, more special part, a number of particular topics—Association, Memory, Imagination, Apperception, etc., are selected and discussed. As might be expected the treatment of these questions is both fresh and interesting. The work is much more than a contribution to, or even a systematic disquisition upon, child-study. Under each section there is given an analysis, always suggestive and sometimes original, of the mental processes concerned. Characteristic of this part of Groos' work is the rejection of hard and fast distinctions. Throughout, the governing conceptions are growth and evolution. There are no sharp lines of cleavage in mental life : Material and Synthesis, Association and Assimilation, Inherited and Acquired Characters, Play and Earnest, etc., each, apart from its congener or complement, exists for logical abstraction alone. As instances of delicate analysis I may refer to the sections on Recognition (p. 147 ff.) and on Judgment (p. 191 ff.). There occur also many practical suggestions towards the theory of education, as that on the importance of training the imagination in children (p. 128 f.) and that on the educative value of the play-illusion (p. 168 f.).

J. L. McIntyre.

Logik. Von Dr. Christoph Sigwart. Tübingen. Third edition. 2 vols. Pp. xx, 498, and iv, 799.

Dr. Sigwart died a month before the publication of this third edition of his great work. He was engaged almost to the end in its revision, but owing to failing health was unable after reaching the middle of the second volume to make it as complete as he had intended to do. More especially he was unable to add an intended excursus on the conception of Causality arising out of controversies with Wundt in particular.

The final publication has been supervised by Dr. Heinrich Maier, who prefaces it with an interesting account of Dr. Sigwart's life and work. He tells us that amongst the author's papers are many completed treatises and parts of his lectures ready for the press, but that he exacted a promise that none of these should be published after his death. This is in keeping with his scrupulous care that nothing should appear under his name which had not received the utmost consideration he was able to give it; when the English version was prepared every page of it had to be submitted to his scrutiny twice over before he would allow it to pass. But this very conscientiousness makes us regret all the more that any contributions of his should be lost to contemporary thought.

One of the additions in the present edition which is of special interest just now will be found at the end of the General Introduction, in a note upon the limits of application of the terms true and false.

H. Bosanquet.

Introduzione alla Metafisica : I. Teoria della Conoscenza. Di PIERO MARTINETTI. Torino, 1904. Pp. viii, 496.

A work of great ability and research, the conclusions of which can here be only very briefly indicated. The author is an idealist. He holds that the universal and fundamental form of being is spiritual being, *i.e.*, being in the form of a conscious act. Not only is the world given to us as a representation, a process of consciousness, but there is nothing else behind that process, no reality producing the representation in our minds; this is the very thing itself. Nevertheless the distinction between subject and object still remains valid: the one is the unifying synthesis, the other the multiple content of consciousness. This does not mean that reality is limited to my empirical self. It simply means that selfhood, reference to a central unity, is the form of all existence, while the contents of the synthesis are capable of indefinite expansion by the compounding and recompounding of one unified group within another. Signor Martinetti, like Mr. Bradley, believes in degrees of reality; but I have not noticed that he associates that idea with Mr. Bradley's name, although he is evidently familiar with *Appearance and Reality* as also with Green's *Prolegomena*. His attention has not apparently been directed to the acute criticism of Mr. H. V. Knox on the new idealism. These feats of acrobatic metaphysics would inspire respect as well as wonder if their performers would condescend to explain one single law of nature, great or small, or to predict one single phenomenon, such as the elliptical polarisation of light. Schelling and Hegel tried something of the sort, but without any encouraging success.

Criticising other philosophers is a more congenial task nowadays; and a large part of this volume is devoted to a refutation of all the metaphysical systems from Plato to Rosmini. It is well done, though very tough reading, being, in my opinion, made unnecessarily hard to follow by the substitution of a supposed logical for the historical order of the systems, and also by an utter neglect of perspective, Rosmini's moonshine, for instance, being given an amount of space quite disproportionate to its importance in European thought.

Most people who care for metaphysics at all are chiefly interested in them through their connexion with religious belief, by way of criticism or of confirmation, light on scientific problems being, as I have hinted, not now forthcoming. In his next volume, dealing with Being, the author will perhaps define his position in this respect. It is not now perfectly clear.

A. W. BENN.

RECEIVED also:—

George Stuart Fullerton, *A System of Metaphysics*, Macmillan & Co., 1904, pp. x, 626.

J. S. Engle, A.M., *Analytic Interest Psychology, and Synthetic Philosophy*, Baltimore, King Brothers, 1904, pp. xxvi, 295.

James Douglas, *Theodore Watts-Dunton, Poet, Novelist, Critic*, Hodder & Stoughton, 1904, pp. xiv, 483.

James Bryce, *Sociological Papers, with an Introductory Address*, London, Macmillan & Co., 1905, pp. xxiii, 292.

Annual Report of the Smithsonian Institution, Washington, 1904, pp. lxi, 875.

University of California Publications, Philosophy, vol. i. Studies in Philosophy prepared in commemoration of the seventieth birthday of Prof. George Holmes Howison; Berkeley, The University Press, 1904, pp. 262.

Prof. J. A. Stewart, *The Myths of Plato*, London, Macmillan & Co., 1905, pp. vi, 532.

Sir Arthur Mitchell, K.C.B., *About Dreaming, Laughing and Blushing*, Edinburgh and London, William Green & Sons, 1905, pp. 157.

A. Wolf, M.A., B.A., *Studies in Logic*, Cambridge, The University Press, 1905, pp. xii, 164.

G. H. Howison, LL.D., *The Limits of Evolution and Other Essays*, second edition revised and enlarged, The Macmillan Co., 1905, pp. xlviii, 450.

Annua Report of the Bureau of American Ethnology, Washington, 1899-1901, 3 vols.

Jacques Loeb, *Studies in General Physiology*, Chicago, The University of Chicago Press ; London, T. Fisher Unwin, 1905, part i., pp. xiii, 423 ; part ii., pp. xi, 425-782.

Dr. L. Lefèvre, *Du Mode de Transmission des Idées*, Williams & Norgate, 1905, pp. 51.

Arvid Grotenfelt, *Geschichtliche Wertmass-stäbe in der Geschichtsphilosophie*, Leipzig, Teubner, 1905, pp. vi, 211.

Adolfo Levi, *L'Indeterminismo nella Filosofia Francese contemporanea*, Florence, B. Seeber (no date), pp. x, 300.

Atti del Congresso Internazionale di Scienze Storiche, Williams & Norgate, 1904, pp. xvi, 266.

Giovanni Marchesimi, *Le Finzioni dell' Anima*, Bari, Laterza & Figli, 1905, pp. xiii, 299.

Prof. Cesare Ranzoli, *Dizionario di Scienze Filosofiche*, Milan, Ulrico Hoepli, 1905, pp. viii, 683.

X.—PHILOSOPHICAL PERIODICALS.

Revue Philosophique de la France et de L'Etranger. Monthly, edited by Ch. Ribot. Felix Alcan, publisher, 108 Boulevard Saint Germain, Paris. January, 1905. **A. Fouillée.** 'Must Pure Practical Reason be Criticised?' **G. Spiller.** 'On Method in the Investigation of the Laws of Ethics.' **Vernon Lee.** 'Essay in Empirical Æsthetics. The Individual in the Presence of the Work of Art.' **G. Richard.** 'The Conflict between Sociology and Philosophical Ethics.' The *Revue Philosophique*, founded in 1876, enters with this number into the thirtieth year of its publication, and continues to maintain the high standard which it established from its inception under the editorship of the eminent psychologist, Prof. Ch. Ribot, who still remains at the helm. When the history of Contemporary French Philosophy shall be written, it will appear that the *Revue Philosophique* is closely bound up with the extraordinary revival of philosophical and psychological studies in France during the last three decades. The January number contains an article by M. Fouillée in which he attempts to show the insufficiency of Kant's Ethics. Kant refuses to subject ethical principles to criticism. *Sic volo, sic jubeo, sic pro ratione ratio ipsa.* "The moral law is thus the great exception to criticism: it cannot admit of any doubt, because if it were not its sole and unique support to itself, any other support having been previously removed by Kant, it would collapse without help or remedy" (p. 2). "Moralism, in my opinion, is only the anteroom of truth. Its supporters are content with showing that positive morals and the positive sciences of nature and of society are not sufficient to constitute a moral order. Hence they infer that such order has a separate independent existence. I submit that we must go farther, that we must found ethics on the principles and conclusions of integral science and integral philosophy" (p. 1). "Kant himself remarks: I hear it loudly proclaimed on all sides: Do not reason! The officer says: Do not reason, but do your drill; the chancellor of the exchequer says: Do not reason, but pay; the priest says: Do not reason, but believe. . . . It is so comfortable to remain in pupilage! Have I not got a book which provides me with wit, a spiritual director who provides me with a moral conscience, a doctor who prescribes to me my diet? I do not need to learn, provided I pay.—Words full of sense, but which may be turned against the moralism of Kant himself. The categorical Imperative also says: Do not reason, but obey. It is true that, according to Kant, he is reason itself, but as he only constitutes pure and formal reason, not the fulness of reason and of reasons, his orders are half 'clairvoyant' and half blind. He therefore remains subject to criticism" (pp. 18-19). "The main critical question which Kant ought to have asked, in ethics as well as in metaphysics, is the following: The *universality* of rational principles, and in particular of moral principles, would it not be simply the derivation and intellectual expression of an ineradicable instinct of intellect and will, or even better, of life?" (p. 20). The article of M. Richard analyses the conflict between

the "metamoral" system of ethics of Prof. Hoeffding and the purely positive and sociological system of De Roberty. February. **Ch. Richet.** 'Peace and War.' **Vernon Lee.** 'Essay in Empirical Æsthetics.' [Second and last article.] **Ch. Dunan.** 'Authority and Liberty.' **M. Halbwachs.** 'Needs and Tendencies in Social Economy.' Vernon Lee's two articles in the January and February numbers are an attempt at a purely subjective and impressionist æsthetic criticism. They are in the main a collection of notes taken in the great picture galleries, and describing the psychological attitude and conditions in the presence of the masterpieces of art. "In my opinion the true data of consciousness, the modes of psychical life, cannot be subjected to rigorous methods. We can only measure with precision the elements of our psychical states, and these elements never reveal themselves in their absolute purity and they lose their significance as soon as they are subjected to a method of isolation. In æsthetics especially we have to do with fusions, abbreviations and a synthesis of psychical states. And in order to understand æsthetic problems, we must begin, not with the elemental fact such as it has been isolated by analysis, but with the complex fact, which also reveals itself in experience. We must proceed not from the simple to the complex; but from the complex, intricate and often obscure data of reality and advance towards the simple but artificial result of analysis" (p. 47). March. **Kozlowski.** 'The Universal Regularity of Evolution and the laws of Nature.' **Ch. Richet.** 'Peace and War.' [Second and last article.] **G. Palante.** 'Friendship and Sociality.' **F. Paulhan.** 'Rational Beauty According to M. P. Souriau.' Prof. Charles Richet has been very closely identified for many years with the Peace and Arbitration movement in France and in Europe. In the two articles before us the distinguished physiologist gives us the philosophical foundations of his belief in peace and arbitration. He starts at the outset with the striking remark that whilst in the eighteenth century philosophers like Leibnitz and Kant took the lead in the movement "zum ewigen Frieden," in the nineteenth century philosophers have taken little interest in this vital question, and have been left behind by politicians and philanthropists. In his article on "Friendship and Sociality," Mr. Geo. Palante points out that psychologically Friendship is essentially an "individualist" and not a social feeling, and "that it implies an intense feeling of individuality, a decided originality of the two 'egos' in presence and a higher type of egoism which separates itself from the commonplace surrounding sympathy" (p. 275). "There is no antagonism between friendship and egotism; whilst there is a very real antagonism between friendship and sociality" (p. 282). The same author, M. Palante, gives us in the same number an analysis of six recent volumes on Nietzsche, which have appeared about simultaneously in Germany, and which are a convincing proof of the extraordinary influence of Nietzsche on the present generation.

Revue de Philosophie. 1er Juillet, 1904. 'Sur le materialisme scientifique,' by **Paul Vignon,** is the fourth and concluding article of a vindication of teleology in the organic world—elaborate and subtle, somewhat needlessly cumbered with technicalities. Among the *comptes rendus* there is one on a Freiburg dissertation, *De causa finali apud Anaxagoram, Socratem et Platonem;* another on M. Picard's *Comment traiter l'enfant à l'école.* M. Picard takes an optimistic view of boy nature, reminding one of Rousseau's *Émile.* It is the modern idea of self-realisation: but, the reviewer pertinently asks, are there not individual types of boy nature that want, not realisation, but reformation?

A theory of M. Chiapelli on a double redaction of Plato's *Theætetus* is exposed by **Auguste Diès,** and rejected as non-proven. **V. Bernies,** in reply to M. le Comte Domet de Vorges, once more urges the expulsion of *intellectus agens* from Neo-aristotelian philosophy. 1er Août, 1904. 'Object and Structure of Physical Theory,' by **P. Duhem,** a contrast between the French method of abstract reasoning and the English use of working models. 'The Psychological Phenomenon of Affinities' (natural likes and dislikes), by **R. de la Grasserie.** 'Aristotle and Plato According to Zeller,' by **Bulliot.** 'Was Aristotle acquainted with the (Platonic dialogue) Sophist?' by **C. Huit.** 'Physical Theory According to Descartes,' by **F. Mentré.** 'Abstraction,' by **J. Gardair,** a defence of *intellectus agens.* 1er Septembre, 1904. 'Object and Structure of Physical Theory, v.,' by **P. Duhem.** 'Amplitude of Law,' by **C. Boucaud.** 'M. Séailles on Providence and Miracle,' by **G. Sortais.** 'Philosophers and Philosophy according to Plato,' by **H. Guyot.** Octobre, 1904. 'Physical Theory,' by **P. Duhem.** 'Providence and Miracle,' by **G. Sortais.** 'Creative Imagination,' by **P. Hermant.** Reviews of **A. Cresson,** 'The Morality of Speculative Reason'; **M. Séailles,** 'Affirmations of the Modern Conscience'; '*Revue de Métaphysique et de Morale*, Mai, 1904,' which number is wholly given over to the discussion of Kant. Novembre, 1904. **Gabriel Tarde,** 'The Notion of Chance in Cournot.' **J. Bulliot,** 'Aristotle and Plato according to Zeller.' **P. Duhem,** 'Physical Theory of Primary Qualities.' Accounts of the International Congress of Philosophy and of History of Sciences at Geneva (September), and of the British Association at Cambridge (August). **E. Peillaube** on colour sensations attaching themselves to sensations of hearing; also on Lévy-Brühl's Lectures at the Sorbonne on Hamilton and Mill. Janvier, 1905. **X. Moisant.** 'Philosophical Thought and Mathematical Thought.' [The one irreducible to the other.] **P. Duhem.** 'Object and Structure of Physical Theory: IX., Physical Law.' **Ch. Huit.** 'The Notions of the Infinite and of the Perfect.' **P. Vignon.** 'Biological Philosophy.' [A review of mechanical theories of biology.] **Comte de Vorges.** 'Abstraction, a Reply to V. Bernies.' [A defence of *intellectus agens.*] Reviews of *The Education of the Democracy, Teaching and Democracy,* pedagogical conferences at the School of *Hautes-Etudes sociales.* Février, 1905. **G. Vailati.** 'The Rôle of Paradoxes in Philosophy.' **X. Moisant.** 'Philosophical Thought and Mathematical Thought.' **Dr. Baltus.** 'Objections against the Theory of Neurone,' neurone being the one element supposed to constitute both the grey and the white matter of nerve tissue. **P. Vulliaud.** 'Ballanche and His System' of Social Palingenesis. Review of **Brunetière,** 'The Utilisation of Positivism,' as showing a way to faith; also of **Le Dantec,** 'Ancestral Influences'; also of **Jacoby,** 'Study of Selection in Man,' a pessimist view of the future of cultivated races. **E. Peillaube.** 'Object of Psychology': "psychological life is quality, and quality only, without admixture of quantity". 1er Mars, 1905. **Ernest Naville.** 'Presidential Address at the Geneva Congress.' ["I consider that all monism which, to affirm the unity of the universe, does not travel back to the act of a free Creator, is a false monism."] **W. Kozlowski.** 'Wronski and Lamennais.' **L. M. Billia.** 'The Unity of Philosophy and the Theory of Knowledge.' **P. Duhem.** 'Physical Theory and Experience.' **Ch. Boucaud.** 'The Crisis of Natural Law.' [Natural law to be arrived at through a natural history of law.] Review of Henry Sidgwick's Lecture on the Ethics of Green, Spencer and Martineau. **A. Bazaillas.** Thesis for Doctorate: '(1) Metaphysical Meaning of Music according to Schopenhauer; (2) Personal Life'

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 12e Année, No. 6, November, 1904. This enlarged number is devoted to the proceedings of the International Congress of Philosophy held at Geneva in September last. Six of the chief papers are printed in full, and critical accounts are given of the discussions in the various Sections. In the 'Actes du Congrès,' which are to be published shortly, only a brief summary will be given of the above articles, while the other addresses, and also the discussions, will be reproduced in their completeness. **H. Bergson.** 'Le paralogisme psycho-physiologique.' [The theory of psycho-physical parallelism involves a fundamental contradiction, and cannot be stated without destroying itself. Stated in idealist terms, it involves the contradictory assertion that the part is the whole; while, if stated in realist terms, it makes the equally impossible assertion that the relation between two terms is equivalent to one of them. Neither standpoint, however, is maintained in its purity, and the contradiction is concealed by a continual alternation between the two interpretations. This argument, which is developed in a most suggestive manner, with great subtlety, seems to have been very inadequately discussed. Doubtless the originality and boldness of Bergson's argument took his hearers rather by surprise. The remarks of Chartier, who reports the discussion (pp. 1027-36), are much more to the point.] **P. Boutroux.** 'Sur la notion de correspondance dans l'analyse mathématique.' [P. Boutroux, in opposition to Peano, Couturat and Russell, maintains the indispensableness of intuition in the development of our mathematical knowledge. "Entre le point de vue du logicien et celui du mathématicien, il y a une difference essentielle; le logicien ne voit dans la détermination des postulats qu'une opération préliminaire et immédiate, précédant le travail logique proprement dit; pour le mathématicien, au contraire, c'est précisément dans le choix des définitions et des postulats que réside la véritable découverte. C'est par l'introduction de notions nouvelles, beaucoup plus que par les transformations de symboles que les mathématiques progressent et progresseront" (p. 917 note). This general point of view is developed with special reference to the notion of correspondence. Couturat in his criticism, as reported by himself (pp. 1046-54), is not very convincing. Boutroux, however, rather gives away his case by implying acceptance of the Cartesian opposition between sense and understanding.] **H. Delacroix.** 'Sur la structure logique du rêve.' [Criticising the view that dreams are due to a rational construction exercised upon a chaos of detached images, Delacroix argues that such separation of the form and the matter is not justified by the facts. In dreams we find rather a multitude of psychical systems, which are not rationally connected with one another, but in each of which there is always a certain amount of order and unity.] **L.-Colonel Hartmann.** 'Définition physique de la force.' [The displacing of the notion of force by that of quantity of motion (*quantité d'action*) cannot be justified either from the mathematical or from the physical point of view.] **Xavier Léon.** 'Fichte contre Schelling.' [From 1801 onwards, all Fichte's principal writings and lectures were inspired by the sole aim of defending his 'Wissenschaftslehre,' and with it the critical point of view, against the philosophy of Schelling, which, while pretending to develop it, really destroyed it.] **F. Rauh.** 'Sur la position du problème du libre arbitre.' [Develops a pragmatist interpretation of the freedom of the will, and advocates a positive introspective method of dealing with the problem.] Comptes rendus critiques des séances du congrès. Livres nouveaux. 13e Année, No. 1, January, 1905. **Leibniz.** 'Trois dialogues mystiques inédits. Fragments publiés avec une introduction par Jean Baruzi.' [The term 'mystical' is rather misapplied to these dialogues; and Baruzi's conten-

tion in his introduction that mysticism is the fundamental element in Liebniz's philosophy is not convincing. The first dialogue is an application in ethics of Descartes' epistemological method; the second and third are mainly theological. All three dialogues are slight, and the first alone is of special interest.] **G. Belot.** 'En quête d'une morale positive.' [A defence of the positivist attitude in ethics. The 'metaphysical' method is discussed at length.] **F. Evellin.** 'La raison et les antinomies (*suite*).' [A continuation of the series from March, 1904. The present article treats of the antinomy of spontaneity and freedom.] **J. Weber.** 'Les théories biologiques de M René Quinton.' [An excellent account of Quinton's interesting theories.] **P. Lacombe.** 'La représentation proportionelle à propos du livre du M. P. Lachesnais.' Livres nouveaux, etc.

L'Année Psychologique (xme année), publiée par A. Binet. Paris: Masson et Cie., 1904, pp. vii, 680. The present Year-book is divided into four parts: (1) Original Memoirs, pp. 1-210; (2) General Reviews, pp. 211-400; (3) Bibliographical Analyses, pp. 401-550; (4) Bibliographical Index, pp. 551-673. The first paper (**A. Binet,** 'La création littéraire') consists of a study in individual psychology, of which the subject is the well-known dramatic author Paul Hervieu. Part of a wider plan, sketched in an earlier number, and which it is intended to complete in later numbers, this study gives, according to Binet, insight into an almost perfect example of "completely rationalised humanity," in striking contrast to the emotional "inspired" type of which Daudet is an instance. The method was by interviews, for which the questions were carefully prepared beforehand, the replies being noted as nearly as possible verbatim. Hervieu's heredity, literary development, language and style, method of work, imaginative faculty, self-criticism, attitude towards the fictive characters of his dramas, his individualism, etc., are passed in review; and all give proof of the preponderance of the logical over the emotional in his mental character. **Lecaillon,** 'La biologie et la psychologie d'une araignée,' describes some experiments on the maternal instinct of *Chiracanthium carnifex*. In natural circumstances the mother remains in the closed nest with the eggs and young until the latter are able to protect themselves. A mother removed under such conditions readily adopts the nest of another mother; but after several days the latter still "recognises" her own nest when placed outside it, and attacks the intruder, who on her part seems "aware of her usurpation" and makes good her escape, if possible, without offering battle. The variations in this behaviour with different lapses of time are instructive. There is no recognition apparently by the mother of *individual* young ones. **Bourdon** et **Dide,** 'Un cas d'amnésie continue,' give a careful study of an extremely complex case. Without serious impairment of any of the senses, the patient showed (1) occasional lapse of the power to recognise familiar objects by taste or smell; (2) almost complete verbal blindness, without psychic blindness; (3) serious disturbance of stereognostic perception, and tactile asymboly; (4) almost no power of recalling events of the immediate past. Perhaps the last feature of the symptoms is the explanation of most of the others, as the authors suggest; when touching one part of an object the patient has already forgotten the impressions received from the others, hence is unable to reconstruct the image as a whole. **Binet** (p. 116) gives an account of the studies being undertaken by the Society for Child-Psychology in Paris. A special characteristic of the society, and an admirable one, is its organisation of "commissions" for the study of definite problems. **M. Michel** contributes a temperate estimate of *Herbert Spencer's* work and of his remarkable influence upon thought in France after 1870. The same writer also gives

a sympathetic study, and a touching picture of *Renouvier*. **Zwaardemaker,** 'Sur la sensibilité de l'oreille,' offers a *résumé* of work done by the author and others, chiefly bearing on the extreme sensitiveness of the ear,—the upper and lower limits of tone-sensation, the number of vibrations sufficient to ensure perception of a tone (practically uniform throughout the scale in spite of the immense difference between the respective *rates* of vibration), the sensibility of the ear for spoken sounds, etc. At the close is a useful bibliography (p. 177). **Binet,** 'La Graphologie,' presents details of an experiment upon the question whether writing gives any trustworthy indication of the sex of its author. The conclusion is that even with experts there is a probability of error of 1-10th. There is, however, no doubt that writing does in some degree reflect the sex of the writer. A valuable addition in this number of the Year-book is a series of accounts by specialists of the progress made in various branches of science which stand in close relation to psychology; as—*Cytology* (Henneguy), *Physiology of the Nervous System* (Fredericq), *Anthropology* (Deniker), *Philosophy and Ethics* (Malapert); a *Psychological Chronicle* is also given, by M. de Varigny, and other *résumés* of work in pedagogy, abnormal psychology, etc.

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Archiv f. d. Gesammte Psychologie. Bd. ii., Heft 2-3. **R. M. Ogden.** 'Untersuchungen über den Einfluss der Geschwindigkeit des lauten Lesens auf das Erlernen und Behalten von sinnlosen und sinnvollen Stoffen.' [An extended investigation, made by means of nonsense syllables and of ordinary reading matter, of the characteristics of various rates of learning, with a view to the definition of the most favourable conditions. The author summarises his results under the headings: time of learning and number of repetitions; relation of learning and retaining; influence of type, and of mode of learning; influence of material and of rhythm. The results themselves are too detailed for quotation.] **O. Messmer.** 'Zur Psychologie des Lesens bei Kindern und Erwachsenen.' [Experiments with tachistoscopic and ordinary reading, made with a view to the diverging analysis of Erdmann and Dodge and of Zeitler. Subjective and objective types; word-form (visual and auditory-motor) and dominant letters; nature and number of errors, etc.] **R. Hohenemser.** 'Versuch einer Analyse der Scham.' [Analysis of modesty as a general state of consciousness, not necessarily conditioned upon sexual processes, but forming a special type of mental inhibition or paralysis ("psychische Stauung"), which may be variously resolved.] Besprechungen. [Meumann on Wundt's *Naturwissenschaft und Psychologie*.] Berichtigung. Bd. ii., Heft 4. **W. Wundt.** 'Ueber empirische und metaphysische Psychologie: eine kritische Betrachtung.' [Reply to Meumann's criticism of the 'Naturwissenschaft und Psychologie'.] **A. Fischer.** 'Die aesthetischen Anschauungen Gottfried Sempers und die moderne psychologische Aesthetik.' [The methodology and derivation of Semper's definition of the beautiful in art; his definition of beauty in art and nature; the validity and the psychological basis of artistic beauty; critical estimate of Semper's æsthetical ideas.] **J. Koehler.** 'Die simultane Farben- und Helligkeitskontrast, mit besonderer Berücksichtigung des sog. Florkontrastes.' [An elaborate study, qualitative and quantitative, of the phenomena of brightness and colour contrast, with especial reference to the conditions of Meyer's experiment. The opposing statements and results with regard to the effect of saturation depend upon different conditions of 'Auffassungsweise'. Neither the physiological nor the psychological explanation is

adequate to the whole body of facts.] Referate. **W. Ament.** 'Fortschritte der Kinderseelenkunde, 1895-1903.'

Archiv f. d. Ges. Psychologie. Bd. iii., Heft 1. **W. Specht.** 'Intervall und Arbeit: experimentelle Untersuchungen über den Einfluss des durch akustische Reize begrenzten Intervalls auf den zeitlichen und formalen Verlauf Körperlicher Arbeitsverrichtung'. [Reaction experiments by the ergographic method, with variation of the preceding interval. The results show marked individual differences.] **F. Schmidt.** 'Experimentelle Untersuchungen über die Hausaufgaben des Schulkindes: ein Beitrag zur experimentellen Pädagogik'. [An elaborate experimental study of home-work.]

Wissenschaftliche Beilage zum 17ten Jahresbericht (1904) der Phil. Gesellschaft an d. Univ. zu Wien. Leipzig: Barth. Pp. 79. This volume consists of four papers read before the above society, on diverse subjects but of uniform excellence. 1. 'Ueber mehrdimensionale Raüme,' **E. Müller.** [A non-technical account of the scientific conception of *n*-dimensional space, emphasising its rational character and its utility, without raising the metaphysical question of the "existence" of such spaces.] 2. 'Ueber den zentralen Sehakt,' **S. Exner.** [The extreme complexity of the visual perceptive process is illustrated from experiments by Hitzig and Imamura on artificially induced hemiamblyopia in dogs. Extirpation of part *either* of the sensory *or* of the motor visual zone causes a psychical defect, which however disappears after a time; when this has occurred, the operation on the *other* region, motor or sensory, of the same hemisphere, produces no further effect, but extirpation of the corresponding part of the other hemisphere results in *double* hemiamblyopia; again the disturbance, once disappeared, returns in full force when the *corpus callosum* is cut between the hemispheres; finally, in double hemiamblyopia an alternation occurs in the use of the right and left halves of the eyes after partial recovery. The explanation offered is partly psychical,—the neglect of low-value impressions and the reinforcement of interesting impressions by new associations; and partly physiological,—the cortex in the second hemisphere is made to function in new ways, and is therefore readily fatigued, hence the alternation of activity.] 3. 'Ueber die Notwendigkeit willenstheoretischer Betrachtungsweise neben der erkenntnistheoretischen,' **R. Goldscheid.** [The main contention of this paper, which is marred by an over-liberal use of formidable terms, is the necessity of a theory of will alongside of the theory of knowledge, both being independent of psychology, which treats of the same objects but in a different aspect. We require a Critique of Will, on lines similar to those of Kant's Critique of Knowledge, to determine the conditions of the possibility of willing, and having as its outcome a critique of *Willenskraft*, *i.e.*, of man's ability not merely to *cognise* ends, but to *realise* them. From this point of view the author criticises the ideals or postulates of the ideological and of the materialist conceptions of historical process, those of the "British" school of national economy, of Socialism, utopian and scientific, of Neo-Darwinism, and of Nietzsche. Progress, purpose, design are categories of human thought, projected into nature just because of the *un*purposiveness of the latter so far as man's interests are concerned. Man alone, in nature, shows a power of *active* adaptation, *i.e.*, the ability to modify his environment to fit his purposes. Goldscheid's theory, however, is not a mere "voluntarism"; logical and causal cognition are as necessary as teleological conation for human progress. Here Nietzsche was at fault, in spite of the great importance of his mission as an apostle of will.] 4.

'Der Wille zum Schmerz ; ein psychologisches Paradoxon,' **R. Eisler.** [A very suggestive paper, of which the conclusion is that pleasure and pain are not, as Eudæmonism insists, the sole goods or evils, but mere *indices* of truly objective, *i.e.*, biological values. Since pain is a necessity of our present existence, and inability to feel pain would mean extinction, there have come to be desires or needs towards pain. The satisfaction of such needs is dependent not on the quality, but on the intensity of the feeling. The argument is largely illustrated from the facts of artistic sensibility.]

J. Lewis M'Intyre.

Kant-Studien. Bd. ix., Heft 3 und 4. October, 1904. **B. Bauch.** 'Luther und Kant.' [A very lengthy statement and comparison of the main positions of Luther and of Kant in ethics and theology. Bauch seeks to show that Luther's moral and religious intuitions are developed into a rational system in the critical philosophy. The chief point of the comparison lies in the analogy between Luther's doctrine of justification by faith and Kant's teaching that nothing is good but the goodwill. The article is needlessly detailed and diffuse.] **A. Riehl.** 'Anfänge des Kritizismus—Methodologisches aus Kant.' [This summary account of the historical origins of Kant's philosophy forms the preface to the forthcoming second edition of Riehl's 'Der philosophische Kritizismus'. It does not seem to indicate any essential modification of the positions taken up in the first edition.] **H. Renner.** 'Reden zur Feier der Wiederkehr von Kants 100 Todestage.' [A review of the various centenary addresses given in the German Universities.] **A. Aall.** 'Zwei dänische Festgaben zum Kant-jubiläum.' **Sitzler.** 'Zur Blattversetzung in Kants *Prolegomena*.' [Fresh evidence is given by Sitzler in support of Vaihinger's theory that paragraphs 2 to 6 of section 4 of Kant's *Prolegomena* have been accidentally displaced, and should be printed as continuation of section 2. It is unfortunate that B. Erdmann, in editing the *Prolegomena* for the new edition of Kant's works, has not thought good to recognise, even in a note, the value of Vaihinger's theory. The facts here cited by Sitzler afford very conclusive confirmation of it.] Recensionen, Selbstanzeigen, etc.

Rivista Filosofica. Anno vi., vol. vii., Fasc. v., November-December, 1904. **G. Zuccante.** 'Sul concetto del bene in Socrate.' [Concludes an essay having for its object to show that Socrates was not a utilitarian. But it is admitted that in defining man's good as the science of the good he falls into something very like a vicious circle. To find the ideal good in God was a task reserved for Plato.] **A. Gropalli.** 'La funzione practica della filosofia del diritto (*cont. e fine*).' [Jurisprudence contributes together with other branches of social science to the art of statesmanship.] **F. Cantella.** 'Giacomo Leopardi e Max Stirner.' [Leopardi was not only the great poet of the nineteenth century, but is destined to be the great philosopher of the twentieth century. Anticipating all Max Stirner's ideas, he has provided a remedy for them by pointing out the beneficent part played by illusion in life.] **E. Morselli.** 'Società e Ideale Etico.' [Points out, what in England at least is no secret, that Herbert Spencer's ethics, so far from having been determined by his theories of biological evolution, were themselves the determinant of his theory of evolution.] Rassegna Bibliografica, etc.

XI.—NOTES.

LEWIS CARROLL'S LOGICAL PARADOX
(MIND, N.S., 3 AND 53, P. 146).

It is difficult to see how this argument, which is no paradox but a paralogism, should have been taken seriously, and that the fallacy in it should not have had its true character made clear nor have received the simple treatment of which it is capable. It is merely a question of language, and hardly needs the technicalities of Logic.

The premisses are:—

(i.) Either Allen is in (first alternative),
or Brown is in (second ,,),
or Carr is in (third ,,).

(ii.) If Allen is out Brown is out.

From (ii.) follows—

(iii.) If Brown is in Allen is in.

Hence by (iii.) the second alternative in (i.) becomes—

Brown is in and Allen is in.

Thus—

Either Allen is in (first alternative),
or Allen and Brown are both in (second alternative),
or Carr is in (third alternative).

Whence obviously—

(iv.) Either Allen is in,
or Carr is in.

And the complete conclusion may be expressed thus:—

Either Allen is in, Brown being in or out,
or Carr is in.

This is the direct argument, and it shows that Uncle's Joe's conclusion that Carr is always in, founded on a *reductio ad absurdum*, is false.

The fallacious *reductio ad absurdum* argument starts from the proposition, inferred from (i.)—

(v.) 'If Carr is out, then if Allen is out, Brown is in.'

Now this means—

'If Carr is out and Allen is out, Brown is in,' and it is only with this meaning that it can be inferred from (i.); for one can only conclude from (i.) that Brown is in if Allen and Carr are both out.

But by (ii.), if Allen is out Brown is out.

We must add therefore to the consequent in (v.) this consequence of 'Allen is out'.

Thus (v.) becomes—

'If Carr is out and Allen is out, Brown is in and Brown is out'.

That is, the *conjunction* of Carr's absence and Allen's absence involves a contradiction.

Thus the conclusion is that the *conjunction* of Carr's absence and Allen's absence is impossible, not that Carr's absence is impossible. This is the true *reductio ad absurdum* argument. The false *reductio ad absurdum* which constitutes the supposed paradox, concludes that Carr's absence is impossible. It would necessitate, of course, if consistent, that Allen's absence was also impossible.

The false *reductio ad absurdum* depends on a mistake about the meaning of proposition (v.): 'If Carr is out, then, if Allen is out Brown is in,' which is interpreted to mean that the proposition 'If Allen is out Brown is in' is a consequent of the assumption 'Carr is out'. This is a mere verbal fallacy.

It is clear that whatever consequent is stated in (v.) is one which is affirmed as necessarily valid only at the times when Carr is out and at no other times. (It is not affirmed that 'if Allen is out Brown is in,' or 'Allen's absence necessitates Brown's presence,' is a rule which is valid at all times, but that Allen's absence necessitates Brown's presence only at the particular time when Carr is out. For if Carr is not out it is not necessary that Brown should be in even if Allen were out, indeed the other premiss shows it would be necessary Brown should not be in.) But the proposition 'If Allen is out Brown is in' is a universal proposition which if valid at any time is valid at all times; it represents a rule which is always valid. It cannot, therefore, be a consequence of Carr's being out, necessarily valid only at the time when Carr is out. In fact the proposed interpretation amounts to the absurd statement: "The rule 'If Allen is out Brown is in,' which if valid at all must be valid at all times is only necessarily valid at the times when Carr is out".

The fallacy then is a mere verbal one, caused by a misunderstanding of what is exactly meant by saying that the proposition: 'If Allen is out Brown is in' is a consequent of the proposition 'Carr is out'.

The fallacy in any case is merely a verbal one. The attempt to solve the 'puzzle' in the January number of MIND fails in all points. The writer thinks the whole mistake ('whole root of the matter') lies in making 'Carr is out' antecedent to 'If Allen is out Brown is *out*'. But it is the writer who is in error. The kind of 'antecedence' meant is familiar and legitimate. Mr. Dodgson's argument makes no wrong use of it and is, so far, quite sound. Further, the writer, after saying that the supposed wrong antecedent is the *whole* root of the matter, does not attempt to prove this, but goes off somewhat inconsistently to prove that something else is wrong. Here again a serious mistake of principle is made accompanied by an impossible example, which would involve a misunderstanding of the simple elements of every *reductio ad absurdum* proof. These mistakes need not be discussed, for it is reasonable to suppose they are slips, and that the writer, on reflexion, will see tney are. It is curious what slips can be made in formal reasoning. No one seems safe from them.

W.

MR. BRADLEY'S DILEMMA.

In a note at the end of the last number of MIND Mr. Bradley asks a question which I am glad to answer again, since he now admits that his acquaintance with my previous answers is defective. Why on such a basis he thought it wise to attack the view does not appear.

However, he asks whether I do or do not hold that no positive doctrine in philosophy is theoretically indisputable. Yes I do, but only if to complain of tautology in a so-called positive doctrine is a way of 'theoretically disputing' it. I admit that a tautologous statement makes no assertion, and is therefore not open to the kind of attack to which only assertions are liable; it cannot be called *false*. Nevertheless the condemnation of it as empty verbiage is complete enough to satisfy all my disputatious desires. And I hold, further,—not as an unquestionable truth, but as a reasoned opinion which I should like to see directly met and questioned—that any statement which does convey an assertion may need correction to an extent which no wisdom before the event can determine.

It is clear that these two points constitute an essential difference between our modern undogmatic kind of 'scepticism' and Mr. Bradley's cut-and-dried notion of what 'scepticism' is compelled to be. We do not attempt to *deny* inapplicable axioms, but we complain of their lack of meaning and value; and we do not claim for our view any other presumption of truth than what may come from its being supported by reasons which no one has yet even attempted to face and overthrow. So long as this position continues the view remains uncorrected, whatever its errors may be; and, while it thus holds good, what matter whether one of its champions is 'self-elected' or elected by some other process not yet invented in philosophy? The question how far the view is true seems to me prior to the question whether this or that person ought to express it,—if indeed one can raise an interest in the latter question at all.

A recent account of the reasons on which the view is based is given in my book on *The Use of Words* (especially § 51), but I shall be glad at any time to supplement them so far as their defects of expression—when these are pointed out—may require. And I shall even be glad to modify the main view itself when any one suggests a reason for doing so. If our opponents' position were strong this ought to be an easy task for them; as things are, their leader's continued preference for imaginary issues compels one more and more to suppose it weak. Perhaps some other member of his party will now volunteer? For though Mr. Bradley is evidently sincere in regarding the discussion as mainly a personal matter, there is no reason why the rest of us should do so.

In conclusion, I am glad to note that Mr. Bradley still thinks it better not to mention what the phrases were which led him to fancy that I regard Mr. Schiller's view as assured beyond the need of further improvement; and he will, I hope, now be able to see that my scepticism is not of a kind that precludes a strong 'benevolent interest' in this new constructive attempt. The question remains how far the pragmatist method will continue to fulfil its promise. Will it help us not only to growtired of empty oracles, but also to make other movements forward?

ALFRED SIDGWICK.

NOTE CONCERNING THOUGHT AND REALITY.

It may be worth while to explain how it is that, to a physicist, even though he be unsmitten with any taint of solipsism, a well-elaborated scheme which is consistent with already known facts necessarily seems to correspond, or have close affinity, with the truth. It is the result of experience of a mathematical theorem concerning unique distributions. For instance, it can be shown that in an electric field, however com-

plicated, any distribution of potential which satisfies *boundary-conditions* and one or two other essential criteria must be the actual distribution; for it has been rigorously proved that there cannot be two or more distributions which satisfy those conditions, hence if one is arrived at theoretically, or intuitively, or by any means, it must be the correct one; and no further proof is required.

One method of constructing a theory is by the use of analogies and working models: of which it is a commonplace to say that, however good they may be, they must fail in representation at some stage, or else they must be no analogy but the thing itself. This making or imagining of models (not necessarily or usually a material model, but a conceptual model) is a recognised way of arriving at an understanding of recondite and ultra-sensual processes, occurring say in the ether or elsewhere. As an addition to evidence derived from such experiments as have been found possible, and as a supplement to the experience out of which, as out of a nucleus, every conception must grow, the mind is set to design and invent a self-coherent scheme which shall imitate as far as possible the results exhibited by nature. By then using this as a working hypothesis, and pressing it into extremes, it can be gradually amended until it shows no sign of discordance or failure anywhere, and even serves as a guide to new and previously unsuspected phenomena. When that stage is reached it is provisionally accepted and tentatively held as a step in the direction of the truth, though the mind is always kept ready to improve and modify and enlarge it, in accordance with the needs of more thorough investigation and fresh discovery. It was so for instance with Maxwell's electromagnetic theory of light; and there are a multitude of other instances.

In the transcendental or ultra-mundane or super-sensual region there is the further difficulty to be encountered, that we are not acquainted with anything like all the boundary conditions, so to speak; we only know our little bit of the boundary, and we may err egregiously in inferring or attempting to infer the remainder. We may even make a mistake as to the form of the function adapted to the case. Nevertheless, there is no better clue, and the human mind is impelled to do the best it can with the confessedly imperfect data which it finds at its disposal. The result therefore, in this region, is no system of definite and certain truth, as it is in the domain of Physics; but emerges either in suspense of judgment altogether, or else in a tentative scheme or working hypothesis, to be held undogmatically in an attitude of constant receptiveness of further light, and in full readiness for modification and improvement.

OLIVER LODGE.

EXISTENTIAL IMPORT.

May I ask the Boolian logicians who still maintain that their formula ($0A = 0$) is necessarily true, whatever the class A may be, to point out the error (if error they find) in the following reasoning?

According to their symbolic conventions, the statement ($XA = X$) asserts that "Every X is A," whatever X and A may represent. By their conventions also the symbol 0 represents *non-existence*. Let A represent *existent*. It follows that the statement ($0A = 0$) asserts that "Every *non-existence* is *existent*," an assertion which is self-contradictory. Hence, the statement ($0A = 0$) is *not* always true for all values (*i.e.*, *meanings*) of A.

Of course, the formula ($0A = 0$) holds good in mathematics for every number or ratio A; as, for example, ($0 \times 2 = 0$). But then, in mathematics, ($0 \times 2 = 0$) does *not* assert that "Every 0 is 2".

H. MacColl.

MIND ASSOCIATION.

The following have joined the Association since the printing of the last number:—

Calkins (Miss Mary Whiton), Newton, Mass.
Turner (Dr. E. L. D.), Providence, Rhode Island.
Warren (Mrs. Fiske), Oxford.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—PRAGMATISM *V.* ABSOLUTISM (I.).

By R. F. Alfred Hoernlé.

The main part of this paper was written before the actual controversy between the champions of Pragmatism and Absolutism in the pages of Mind and other philosophical periodicals had begun. This explains why it contains very little reference to the arguments advanced on either side in recent articles. But, perhaps, I may add a new note to the discussion, by entering the lists not as a partisan but as an impartial spectator, who brings the rival theories together for comparison, and is willing to give either a chance by searching for its merits first, and not till then for its faults.

What seems to me to give to the conflict between Pragmatism and Absolutism its real importance and significance is, that it is but a phase in that wider conflict between *Intellectualism* and *Voluntarism*, the roots of which can be traced back to the reaction against the Hegelian Philosophy in Germany in the years of 1840-80. In England the reaction is but just beginning. Hegelian influence in one form or another has set its mark indelibly on the best of English thought in the last forty years. Now we have much of the same outcry against Intellectualism and the 'barrenness' of the Absolute with which Germany was familiar in the sixties. We have the same claim that salvation lies but in the recognition of the *volitional* side of experience, and we have, perhaps, something of the same tendency to intellectual anarchy, which invariably accompanies any attempt to make the mere will supreme. However, English Voluntarism differs in several important points from its German forerunners. It is less metaphysical than the romantic Voluntarism of Schopen-

hauer, and less markedly ethical than the ethical Voluntarism of men like Sigwart and Paulsen. Its main character and interest are *epistemological*, and its main key to the solution of epistemological problems is the conviction that the practical and the theoretical consciousness cannot be cut asunder, but that our whole consciousness is *one* in character and *one* in method, *purposive* in all its manifestations, and guided by interests and ends both in the selection and in the subsequent handling of its materials. Two quotations will reveal the fundamental difference in spirit and temper between Intellectualism and Voluntarism more clearly than I could expound it. Here is Mr. Bradley's own testimony as to the point of view from which he approaches philosophical problems: 'the actual starting-point and basis of this work,' he says in the Appendix to *Appearance and Reality*, 'is an assumption about truth and reality. I have assumed that the object of Metaphysics is to find a general view which will *satisfy the intellect*, and I have assumed that whatever succeeds in doing this is real and true, and that whatever fails is neither.' The Voluntarist, on the other hand, is not content with a *theory* about reality, however satisfactory to the intellect, but looks for a satisfaction of the other demands of our nature, ethical, religious, æsthetic as well. And he looks for it not in theoretical reflexion but in a '*harmony*' of life towards which reflexion is but a means and in which intellectual satisfaction is but an element. 'Experience is life,' as Prof. James Ward puts it, and, having borrowed this phrase from him, I cannot do better than illustrate the voluntaristic point of view by a passage from *Naturalism and Agnosticism*:[1] 'Experience can *not* without mutilation be resolved into three departments, one cognitive or theoretical, one emotional, and one practical. . . . It is true that what we take and what we find we must take and find as it is given. But, on the other hand, it is also true that we do not take—or at least do not take up—what is uninteresting; nor do we find, unless we seek, nor seek unless we desire. The cognitive aspect of experience, in a word, is far more one of experiment, as its very etymology suggests, than one of mere disinterested observation. The philosopher may

[1] Vol. ii., part iv., lecture xv., p. 133; *cf.* also p. 131: 'The objects of experience are not primarily objects of knowledge, but objects of conation, *i.e.*, of appetite and aversion'; p. 189, 'thinking is doing, and like all doing has a motive and has an end'; p. 235, 'however much for purposes of exposition we may abstract, we cannot separate intellection from volition'. To Prof. Ward as to the Pragmatist scientific laws and conceptions are 'teleological instruments'.

look on at the buyers and sellers in the market-place, but the real experience is their trafficking, not the notes of this detached bystander. Regarding experience in this wise, as life, self-conservation, self-realisation, and taking conation not cognition as its central feature, we must conclude, that it is not that "content" of objects, which the subject cannot alter, that gives them their place in its experience, but their worth positive or negative, their goodness or badness as ends or means to life.' This passage, parallels to which from writers more strictly Pragmatist than Prof. Ward I shall have occasion to bring forward in the course of my paper, shows clearly some of the most characteristic features of the new movement of thought. We have the insistence on the one hand on the unity, on the other on the purposiveness of mental life; we have the revolt against the merely theoretical attitude, a hatred of abstract reflexion which will not submit its results to the test of concrete experience; we have an impatience of truth, conceived as a purely intellectual possession, which is like 'a thing apart,' and the holding or not holding of which seems to make no difference in our lives. It is this which inspires the common objections to the detached intellectual atmosphere of Mr. Bradley's Absolutism, which, by declaring the Absolute to be perfect, seems to make the existence of imperfection but an illusion, an accident of our limited, one-sided point of view, and thus to deprive of all real value and significance the very things which are of the highest importance to us, *viz.*, the increase of knowledge and the doing of good, the removal of error and the defeat of evil. And, for this very reason, such a conception in the eyes of the voluntarist cannot even be 'satisfactory to the intellect,' the function of which is to guide and illumine our life. And life is not mere inward reflexion. Rather it is the translation of thought into action, the embodiment of truth in conduct—whether we make use of our scientific knowledge in the narrow sense of practice, or live up to our ethical and religious ideals. In fact, all truths are in the end but convictions, and convictions are principles on which one is ready to act. Or, in other words, they are truths which are not just so much intellectual ballast, but have become part of our personality, and, therefore, cannot fail to influence the expression of that personality in action and life. If Truth thus stands in the service of Life, can we refuse to recognise the importance for cognition of non-intellectual factors, feeling, volition, interest? Must we not be ready to consider the cognitive value not only of scientific conceptions but of moral, religious, æsthetic conceptions as

well? For are not Science, Morality, Religion, Art, so many different ways of seeking an 'harmonious' and 'satisfactory' life; attempts so to view the world theoretically, and so to modify it practically, that man may live therein the best life he has it in him to live?

There is, indeed, a curious passage, in which Mr. Bradley seems to admit all these contentions of his critics. We read: 'I admit, or rather I would assert, that a result, if it fails to satisfy our whole nature, comes short of perfection. And I could not rest tranquilly in a truth if I were compelled to regard it as hateful. While unable, that is, to deny it, I should, rightly or wrongly, insist that the inquiry was not yet closed, and that the result was but partial. And if Metaphysics is to stand, it must, I think, take account of all sides of our being.'[1] Here then Mr. Bradley appears to admit, in so many words, that intellectual satisfaction is not the highest achievement, and that, though the intellectual problem may have been solved, other considerations have to be taken into account.

But hardly has he said so much, when he recollects that he is a metaphysician, whose business is to think with terrible consistency: 'That alone is really valid for the intellect, which in a calm moment the mere intellect is incapable of doubting. It is only that which for thought is compulsory and irresistible—only that which thought must assert in attempting to deny it—which is a valid foundation for metaphysical truth.'[2] And again: 'the task of the metaphysician is to inquire into ultimate truth, and he cannot be called on to consider anything else, however important it may be'.[3] In fact, as we were told in the Introduction,[4] the metaphysician attempts a 'pure development' of thought guided by its own distinctive principles. He will have nothing to say to thought 'entangled with other functions of our being'.

Thus we have a striking alternation in Mr. Bradley's points of view. His Intellectualism always claims to be absolute and to criticise all other sides of our nature, and then again it is reduced to its proper place as one side amongst others with no better rights than they. When Mr. Bradley takes up the point of view of the Absolute and reflects that it must do justice to all sides of our nature, the intellect sinks to the level of the others. But when he thinks *about* the Absolute, the *intellect* suddenly appears as the only road to reality, in spite of the fact that all our other

[1] *Appearance and Reality*, p. 148.
[2] *Ibid.*, p. 151. [3] *Ibid.*, p. 450. [4] *Ibid.*, p. 4.

functions bring us in touch with reality and 'qualify' it. And even though Mr. Bradley proposes to 'satisfy' the intellect, it cannot be said that he doles out satisfaction with a generous hand. For the result of his reflexions is, that not a single intellectual concept, not a single attempt to give an account of the nature of Reality, is intellectually satisfactory. And as a consolation Mr. Bradley has nothing to offer but the 'assumption' that the Absolute is self-consistent, and that all contradictions must, therefore, be reconciled in it 'somehow'.

However, if Mr. Bradley's Absolutism is thus beset with difficulties peculiarly its own, it may be as well to point out by anticipation, that Pragmatism, at any rate in its present state of development, is by no means free from difficulties at least equally serious. The main problem for it—and it is one on which a clearer and more thorough-going statement by a leading Pragmatist is urgently needed—is the relation of Psychology to Logic.[1] Not Pragmatists only, but Voluntarists of all shades, whilst they agree in their protest against the traditional treatment of Logic as a Science of 'pure' thought, do not, by any means, make it very clear what they would put in its place. It is not enough to cry out against the bloodless abstraction of pure thought which is nowhere met with in experience, or to demand that Logic should deal with the concrete processes of thought as they occur in individual minds indissolubly mixed up with feelings and emotions, desires and volitions. This is so far but a programme of work, but of performance we have as yet but scanty fragments. Above all, as far as I am aware, there has been no thorough and satisfactory attempt to grapple with the central problem of the relation of thought as studied by Logic to thought as studied by Psychology. There is, in the first place, the most important question, whether the Psychologist is enabled, both by his stand-point and by his methods, to deal with logical and epistemological problems at all. Psychology, one is naturally inclined to think—and it cannot be said that psychologists have done anything to dispel the illusion—is as little capable of laying down the law about the 'true' and the 'real,' as it is capable of determining our standards of right and wrong. Granted that it can show the ruling part played in our lives by the

[1] This demand has to some extent been met, since the above was written, by the publication of Prof. Dewey's *Studies in Logical Theory*, though Prof. Dewey does not, as far as I know, describe himself as a Pragmatist. But Pragmatists seem inclined to claim him as one of their number.

desire for knowledge and truth, is it therefore able to decide what must be the character of a mental content, if it is to satisfy that desire? And, even assuming that the solution of this problem lay within the sphere of Psychology, we should, in the second place, require some more or less authoritative statement about the concrete processes of thought with which we are dealing. It is by no means clear that Psychologists, at present, agree sufficiently in their theories, to speak on this question with a single and a steady voice. On the contrary, the variety of opinions as to the proper analysis and classification of all except the very simplest mental processes is embarrassingly great, as any student of Psychology knows. And even, if we assume this difficulty to have been overcome, there is the further obstacle, that Psychology does not as a rule give its deliverances in a form which makes them available for the solution of epistemological problems. Prof. Stumpf's saying, quoted with approval by Prof. Ward,[1] that 'that cannot be true in epistemology which is false in psychology,' may, rightly interpreted, be true; but it is surely significant that Prof. Ward himself is driven to complain of the 'covert dualism that renders our psychological terminology unsuited to epistemological discussions'.[2] Prof. Ward has here laid his finger on the weak spot. Psychology is, or hopes to be, a Science, and like other Sciences it rests on assumptions which it is neither its business nor its interest to criticise. But, if it is the task of epistemology to examine the conditions of the origin and the validity of knowledge, *including the Sciences*, it is very far from clear, that its best hope of success lies in placing itself on the basis of one particular science. In fact, that looks rather like a circle, involving, as it does, the acceptance of the very assumptions we had set out to criticise. In short, granted that Psychology has shown the essentially purposive nature of our thought, and granted that 'true' and 'real' are terms of value, which have meaning only to a thought guided by purposes, interests, ends, it does not follow that Psychology can help us towards that regulation and systematisation of our values which we desire.

After this preliminary statement of the problems which we must expect to face, I will proceed to a detailed examination of Mr. Bradley's Absolutism. And, since I have maintained that the main interest of Pragmatism is *epistemological* and centres round the questions how and why we come to accept this or that fact or theory as real and true,

[1] *Naturalism and Agnosticism*, vol. ii., p. 133. [2] *Ibid.*, p. 159.

I will begin with a discussion of Mr. Bradley's attitude towards theory of knowledge.

Mr. Bradley has *no* theory of knowledge in the ordinary sense. The very problem: what can we know? or: how can we know anything at all? is stigmatised by him as self-contradictory. To doubt our ability to know reality is to claim dogmatic knowledge of the character of reality. For all valid doubt must rest on a positive basis: 'To say that reality is such that our knowledge cannot reach it, is to claim to know reality . . . for, if we had no idea of a beyond, we should assuredly not know how to talk about failure or success'.[1] And similarly he urges self-contradiction against the further doubt: Granted that genuine knowledge is to be had, how are we to recognise it, when it comes? Any one, he replies, who accepts any statement as true or rejects it as false, obviously applies a criterion. And since this criterion is always non-contradiction, we arrive at the result: 'Ultimate reality is such that it does not contradict itself; here is an absolute criterion'.[2]

From the position here taken up by Mr. Bradley several important consequences follow :—

(1) The denial of the epistemological problem directly involves the identity of Being and Thought.[3] The only ground from which the problem: Can Thought grasp the nature of Reality? is seen to lose its meaning is the 'qualification'—to use Mr. Bradley's own phrase– of Reality by *every* thought. The term 'qualification' is used by Mr. Bradley to express, that the identity of Thought and Reality is *far* from being total and complete. All that it means for the present is, that every Thought bears *some* relation to Reality. None is quite insignificant.[4] To think is to judge, and to judge is to predicate an idea (= a thought-content) of reality, for reality is the subject of every judgment. But if every thought qualifies reality, do they all qualify it equally? Are all judgments equally true? By no means, replies Mr. Bradley. None indeed is wholly untrue, but all are only more or less true. And we discover that by applying the criterion of reality itself. For reality, as we have seen, has a positive nature of its own, *viz.*, to be non-contradictory, or, in a positive phrase, self-consistent. Thought therefore will qualify it

[1] *Appearance and Reality*, p. 2. [2] *Ibid.*, p. 136.

[3] *Ibid.*, p. 516: 'If there were any reality quite beyond our knowledge, we could in no sense be aware of it; and if we were quite ignorant of it, we could hardly suggest, that our ignorance conceals it. And thus, in the end, what we know and what is real must be co-extensive.'

[4] *Ibid.*, p. 366.

fully, only so far as it is non-contradictory. Here, then, we have the reason why the ontological criterion of self-consistency is at the same time the logical criterion of non-contradiction. If reality is non-contradictory, and if all thought, in the end, qualifies reality, the criteria in both cases must be identical.

(2) And it is to be observed that Mr. Bradley values non-contradiction primarily and supremely as a criterion of reality. It has only a subordinate and secondary use as a criterion of truth. The burden of his criticism of Time, Space, Relation, etc., always is: self-contradictory—therefore not real. Indeed he applies the criterion to truth itself: Truth is self-contradictory, for it has an unwholesome hankering after 'suicide'. It aims at complete identity of thought and reality, but with the attainment of this identity thought will have become the same as reality, and Truth, *as such*, will have disappeared. Truth, in fact, lives only by never being fully itself, for by becoming itself, it will at once have passed into something higher and more than itself. 'Truth is the predication of such content, as, when predicated is harmonious,'[1] but such harmony is never fully attained, for the predicate never fully agrees with the subject. 'If Thought were successful, it would have a predicate consistent in itself and agreeing entirely with the subject.'[2] Thought thus only exists, because the gap between predicate and subject refuses ever fully to be bridged. So long as the gap remains, it testifies to the failure of thought, and yet its removal would mean that thought, as thought, passes away. It is 'merged' in reality. Thus truth is truth only because it is never fully true. The verdict must indeed be: self-contradictory—therefore not real.

(3) The criterion of non-contradiction, it will be noticed, is used by Mr. Bradley in a very restricted sense. The contradictory for him is that which is *inconsistent with itself*, not that which is inconsistent with something else. I draw attention to this point, because agreement of thought with its object is the most common criterion in theory of knowledge. Mr. Bradley does indeed, as in the passage quoted above, speak of the predicate as 'agreeing with its subject,' but, as the subject of a judgment is reality, and as the character of reality is to be self-consistent, the predicate requires no more than inner self-consistency to be real. But what, on this view, becomes of the essential nature of thought, which has always been regarded as bound up with the *Dualism* of

[1] *Appearance and Reality*, p. 165. [2] *Ibid.*

subject and object? If self-consistency is the only standard, what of thought's reference to an object *other* than thought? Is there nothing beyond thought? Is thought the thing itself? Or is it rather, as has commonly been held, *of* and *about* the thing? Does it not follow from Mr. Bradley's own theory, that reality must be *other* than thought, seeing that reality is self-consistent, but thought, even at its best, is not? To all these questions Mr. Bradley replies: Thought *is* of something other than itself, and it *does* involve a Dualism. But he has his own way of explaining this Other and this Dualism:[1] In everything real we can distinguish two aspects, existence and content, a 'that' and a 'what'. We can distinguish these aspects, but we cannot separate them without destroying the real. As soon as we take a content in abstraction from existence, we lose, in a manner, touch with reality, but we get instead an '*idea*,' the instrument of thought. 'An idea is any part of the content of a fact, so far as that works out of immediate unity with its existence.'[2] Here, then, we have the *Dualism*, without which thought cannot work: "Thought in its actual processes and results cannot transcend the Dualism of the 'that' and the 'what'."[3] The function of judgment expresses its constant effort to overcome the Dualism and to restore existence to the thought-content, by predicating it of a subject, in which—whatever character it may possess in itself—the aspect of existence is, for the purposes of the judgment, the only one that counts. In this subject we thus obviously have something that is *not* thought, and yet is closely related to thought; it is beyond thought, but not out of the reach of thought like some unknowable thing in itself. We know already that the subject is, for Mr. Bradley, reality, and we shall see, that he defines it as 'sentient experience,' and that it includes Feeling, Volition, Sensation, etc., no less than Thought. To understand this reality is the ever un-solved problem of thought. For thought is in its essence *relational*, and can, therefore, never deal adequately with the immediacy of feeling, or exhaust the content of the given, which is ever passing beyond itself and revealing its dependence on something other than itself. It is this failure of thought to perform its task fully, which finds expression in its sense of something *Other* and Beyond: 'the reality that is presented is taken up by thought in a form not adequate to its nature, and beyond which its nature must appear as an Other'.[4] This Other thought is for ever striving to master,

[1] *Appearance and Reality*, ch. xv.
[2] *Ibid.*, p. 163. [3] *Ibid.*, p. 168. [4] *Ibid.*, p. 179.

but if mastery were ever completely attained, thought, *as thought*, would no longer exist. It would have become one with reality and passed into a higher and more immediate kind of experience, in which yet none of the results of its work are lost. Let us put this tragic dilemma of thought more clearly: Reality, as given in immediate feeling, is inconsistent with itself. On the one hand it possesses the immediacy and self-subsistence, which are the marks of true Reality, but, on the other, its content belies these features by being confused in itself and pointing beyond itself for explanation. It comes to us as one, when really it is many; it pretends to be harmonious, when really it is full of diversity. The very fact that the given is in continual change bears witness to its inner instability. It aims at becoming fully self-subsistent, fully individual, and it can only do so by a movement of expansion, a taking in of outside features, until the process finds its end in an all-inclusive whole. This is what Thought tries to achieve, but in setting to work on the given, it separates content and existence, and thus destroys the character of immediacy. And the elements into which it analyses the content seem to fall apart and to resist henceforth any attempt to rejoin them, whilst yet maintaining their distinction. In the given they were undistinguished and experienced together. Thought distinguished them, but their 'togetherness' is gone. It is replaced by a relation, which seems external to the terms, and yet cannot be so. And the terms themselves seem arbitrary creations, which on closer inspection break up into relations from within. Thought can hold all these distinctions together but not experience them as *one*. What it ever aims at is an experience, which should possess immediacy and yet preserve the results of analysis without their relational form. 'Thought can form the idea of an apprehension, something like feeling in directness, which contains all the character sought by its relational efforts.'[1] And it 'understands that, to reach its goal, it must get beyond relations'. This higher experience Mr. Bradley boldly identifies with the Absolute: 'In our Absolute thought can find its Other without inconsistency. The entire reality will be merely the object thought out, but thought out in such a way that mere thinking is absorbed. This same reality will be Feeling satisfied completely. In its direct experience we get restored with interest every feature lost by the disruption of our primitive felt whole. . . .'[2]

Here, then, we have reached the Absolute, here we pass

[1] *Appearance and Reality*, p. 181. [2] *Ibid.*, p. 182.

from theory of knowledge into Metaphysics. Or, rather, we have been talking Metaphysics all along. For if knowledge presents a problem to Mr. Bradley at all, it is *not* the traditional one: How can thought apprehend reality at all? but rather: Why does thought *not* apprehend reality fully? The ordinary epistemologist's difficulty is, so to define thought's Other, that thought is able to deal with it. Mr. Bradley's difficulty is rather, to differentiate the Other sufficiently from thought.[1] Now for any theory of knowledge a Dualism of some sort is essential, whether we call it Subject and Object, or Ego and Non-Ego, or Consciousness-as-such and Thing-in-itself. Except by means of such a Dualism no coherent account of knowledge can be given. The Dualism, therefore, is for Epistemology *ultimate*. But this is just what it cannot be for Mr. Bradley's Metaphysics. For every Dualism is self-contradictory—and the ultimate reality must be self-consistent. Hence Mr. Bradley is but admirably logical, when he maintains, that because of the Dualism, which they imply, knowledge and thought are 'appearance' and not reality. Their real nature, as elements in the Absolute, must be something different from the Dualism which Epistemology ascribes to them. And here I wish to emphasise one point. The transcendence of this Dualism in the Absolute in such a way that the differences of thought are retained and yet overcome in a higher immediacy of experience, is not anything we are familiar with in *our* experience. It is, therefore, nothing more and nothing less than an *ideal*. And, though Mr. Bradley's picturesque phraseology veils the fact, it is yet manifest, that he can only succeed in representing this ideal as the ultimate reality by the familiar Scholastic Expedient of identifying the *ens perfectissimum* with the *ens realissimum*.[2] Such an identifica-

[1] *Appearance and Reality*, p. 175.

[2] Mr. Bradley criticises the ontological argument in chap. xiv. and again in chap. xxiv. of *Appearance and Reality*. Its principle, according to him, is perfectly sound. Since content and existence are inseparable in reality, it is in general legitimate to argue from the presence of an idea to the reality of that idea. What is illegitimate is only to argue, that the idea must be real *as such, i.e.*, with all the limitations and inconsistencies which beset our ideas, but which are resolved and reconciled in the Absolute. Now the idea of Reality as self-consistent is from the nature of the case not one that is self-contradictory—hence a self-consistent reality really exists. This is Mr. Bradley's ontological proof of the existence of the Absolute. It reveals clearly his metaphysical and non-epistemological point of view. It is only because the self-consistency of Reality is assumed to start with, that Mr. Bradley can afterwards venture to criticise even the highest efforts of thought as self-contradictory appearances. Otherwise he would have found it an awkward question

tion cannot be more than a Postulate, and if Mr. Bradley were to defend it as such, I should be far from attacking it. My point here is rather, that by *not* treating it as such Mr. Bradley involves himself in serious difficulties, when he has to explain the positive relation of our concrete experience to the Absolute Experience. That our experience, being self-contradictory, is not real, we have seen. The question now is, is its relation to reality purely of this negative kind? Has it no place in the totality of the Absolute Experience at all?

The answer to this problem Mr. Bradley gives in his famous doctrine of 'Degrees of Truth and Reality'. Mr. Bradley's method of exposition, his treatment of 'Appearance' first, and of 'Reality' afterwards, has led to some misapprehension as to the place and necessity of this doctrine in his system. Hence one often hears it condemned as mere 'hedging,' as taking back with one hand what he had given away with the other. And yet the argument, which culminates in the doctrine of 'Degrees of Reality,' is a perfectly simple and logical deduction from Mr. Bradley's premisses. Here it is in a nutshell: Mr. Bradley's conception of Reality rests on two assumptions: (1) The *formal* principle, that reality is non-contradictory; (2) The *material* principle, that reality is sentient experience.[1] He tests experience in the light of his formal principle and finds it inadequate. It is beset with contradiction and so far not real. But, on the other hand, as experience it must be real. For Reality has no other content, no other matter, than experience. In short, our experience, *quâ* self-contradictory is unreal, and *quâ* experience, real. In other words, it is appearance and not reality, but appearance possessing a certain Degree of Reality. The doctrine of Degrees of Reality thus reconciles what would otherwise be a plain contradiction. And all that it remains for Mr. Bradley to do is to lay down the principles on which we can determine, what Degree of Reality any given appearance possesses.

to answer: how our thought, if it is so deeply infected with inconsistency, as he finds it to be, could ever conceive a consistent reality? Does not Mr. Bradley himself admit that 'the idea of the Absolute, as an idea, is inconsistent with itself' (*l. c.*, p. 397)? Would Mr. Bradley perhaps have tried to escape from this difficulty by adopting the principle of Descartes' first proof of the existence of God: finite man could never have conceived the idea of the Infinite being—hence the Infinite itself gave to man the idea of itself—hence the Infinite Being exists?

[1] 'Sentient experience, in short, is reality, and what is not this is not real' (*Appearance and Reality*, p. 144).

So far all is plain sailing. It is in the detailed working out of the doctrine that fatal difficulties reveal themselves. I shall try to show in the sequel, that Mr. Bradley is unable (as indeed he himself admits) to fix positively the place of any appearance in the scale of Reality, and that this inability points to a fundamental flaw in his philosophy, which in the end is fatal to it. For the present, however, I am more concerned to justify and defend the doctrine of Degrees, and to show, that Mr. Bradley arrives at it not by illegitimate 'hedging,' but is driven to it by the irresistible logic of his own thought. Let me put this more fully: An appearance is for Mr. Bradley a partial, one-sided, inconsistent aspect of reality. Strictly speaking, every presentation, every phenomenon, every 'fact' in the widest sense of the term, is an appearance, but no less every theory about facts, scientific or philosophical, ethical or theological. Appearances, in short, are *co-extensive with experience*, if we take that word in the widest sense as including every kind of psychical existence, feelings, volitions, immediate apprehensions and anything that thought has made out of the directly given by ideal constructions. Indeed it is with these latter appearances that Mr. Bradley is mainly concerned, for it is they which claim to give an account of reality as it is in itself. He tries them by his standard of reality: non-contradiction or self-consistency, and finds them all wanting, a scientific conception like causality no less than an ethical conception like personality or a religious conception like God. There is not one, which can pretend to be real. So far the result is purely negative, and its logical outcome threatens to be systematic Scepticism. But Mr. Bradley is fully aware that a negative assertion is valid only when it rests on a positive basis. You can only condemn an appearance as *not* real, if you have 'absolute' knowledge of the real. A source of such knowledge Mr. Bradley claims to possess in his conception of Reality as self-consistent. Can any positive content be developed out of this so far purely *formal* criterion? In the first place the formal character itself admits of further determination: Reality must be *one* and not many. For if there were many reals they would have to be absolutely independent of each other, but their independence would be irreconcilable with their plurality. Plurality always implies some sort of co-existence, co-existence implies relation, and relation destroys independence. Result: there is only *one* Reality, and that must be an individual systematic whole. And in the second place, what *content* does this whole possess? Since all experience has been shown to be unreal and ap-

pearance, is not reality reduced to an empty schema? By no means, replies Mr. Bradley, for the same criterion which condemns the appearances at the same time secures them as material for reality! For no reality could be self-consistent which did not *include* the appearances. For supposing it did not, then it would stand over against the appearances as a thing-in-itself, and as such it must either stand in some relation to the appearances or it must not. If it is related, then its individuality and self-consistency are gone at once, for since relations are only possible within a wider whole, both reality and the appearances would belong to some wider whole, and that whole would be the ultimate reality. On the other hand, if reality stands in *no* relation to the appearances, then the latter are not accounted for. And yet they must be dealt with, for 'nothing is actually removed from existence by being labelled "appearance"'.[1] 'Appearances exist . . . and whatever exists must belong to reality.'[2] And therefore we must correct the former unqualified statement that all appearances are 'unreal'. They are unreal as compared with the total reality, for no single partial aspect and no sum of such partial aspects could possibly take the place of the total reality. The attempt so to treat it, *i.e.*, the attempt, to regard any partial aspect as real in the sense in which only the whole can be real at once involves us in contradiction. But on the other hand all appearances are to some extent real, for 'the Absolute appears in its phenomena and is real nowhere outside them'. The two statements are for Mr. Bradley not contradictory, they are complementary aspects of the same truth.

It is instructive to compare the popular distinction of appearance and reality with Mr. Bradley's philosophical one. When in ordinary language we contrast 'what appears' with 'what really is,' the appearance is as little removed from existence as any of Mr. Bradley's 'appearances'—but it is fully *explained* by the reality, whereas Mr. Bradley's appearances are not. When in ordinary experience one group of facts conflicts with another, we try to remove the contradiction by taking the one group as appearance and the other as reality, *i.e.*, by viewing the group which in itself would have suggested a different principle of explanation as being a manifestation of the principle of the other group. A few simple examples will make this clear. The hypocrite seems our friend, but really is our enemy. Here we have two groups of facts: those which point to friendship, and those which point to

[1] *Appearance and Reality*, p. 15. [2] *Ibid.*, p. 132.

enmity. We cannot reconcile the latter with the assumption of friendship, but we can understand that friendly acts may be used as a means of hostility—hence the hypocrite's hostility is real, and his friendship appearance. Similarly in the case of the earth and the sun: the apparent motion of the sun round the earth can be explained also on the supposition that the earth really moves round the sun, and as this theory further explains facts which were inexplicable on the geocentric theory, the heliocentric movement is real. The contrast of appearance and reality is thus in ordinary language the solution of a problem—for Mr. Bradley it is the very problem itself. For ultimate reality, or the Absolute, is inaccessible to us. We can think of it as non-contradictory, but we cannot realise it in detail. Living in the world of appearances, we have no positive knowledge of the way in which the appearances are 'transmuted' and 'merged' in the experience of the Absolute. All we can do is to determine whether all appearances fall equally short of reality, or whether, *as compared with each other*,[1] one is more or less real than another.

However, even this task is not fully discharged by Mr. Bradley. He gives us no complete scale of all appearances arranged according to the degree of their metaphysical value. For he claims to be merely expounding a general principle, not writing a system of Metaphysics. However, he indicates, at least, the general principles on which the valuation of appearances and their ultimate transmutation in Reality must take place.

Reality, as we have seen, is an all-inclusive, individual whole. Now individuality possesses two characteristic marks: (i.) all-inclusiveness, (ii.) internal harmony. As Mr. Bradley's pupil, Prof. A. E. Taylor, puts it: 'The more a thing includes of existence and the more harmoniously it includes it, the more individual it is'.[2] It follows, that the more comprehensiveness and wealth of content an appearance possesses, or the more thoroughly it is internally

[1] The standard of comparison is indeed the self-consistency of Reality, but all the same we cannot strictly say, that all appearances are compared with reality, for in that case we should know, *how far* the highest appearance is as yet removed from reality. But as we do not enjoy the experience of the Absolute, and do not know how each appearance is transcended in it, we cannot positively say, how near any particular appearance approximates to reality. *Hence we really get degrees of appearances rather than degrees of reality.* We can call one appearance higher than another, but we cannot fix its exact place in relation to reality; the 'degrees' are relative, not absolute.

[2] *Elements of Metaphysics*, p. 110.

systematised, the more real it deserves to be called. And at the same time these two criteria suggest, how an appearance must be turned into full reality, *viz.*, by *supplementation*, which corrects its want of content, and by *rearrangement*, which cures its inner confusion. We may judge an appearance either positively by the individuality it has got or negatively by that which it lacks. Our two standards by no means necessarily coincide; an appearance possessing a high degree of inner harmony may at the same time be poor in content, and again another full of concrete content may be but imperfectly systematised. Hence the criteria of comprehensiveness and systematisation often give different results as applied to the same appearance, and an appearance which stands high as tested by one, may stand low in the light of the other. Events, for instance, must be judged no less by their fulness of content than by the length of time and width of space which they occupy. Abstract laws possess little content, but cover a large extent of reality; some concrete fact on the other hand, though rich in content, suffers from want of systematisation.[1] And again, we must take the *effectiveness* of appearances into account, their sphere of influence, as *e.g.*, the range of applicability of a scientific conception. Again, neither the wealth of content nor the inner systematisation of an appearance may be fully exhibited, if we look only to its manifestation in Space and Time. In fact it is only the 'meaner realities' which are capable of being verified as sensible facts. Neither the inner unity nor the comprehensiveness of the higher appearances, such as *e.g.*, a social organism, are visible to the eye. Such considerations give an example of the way in which all appearances, from a mere feeling of pleasure and pain to an abstract law, from a single narrow sensation to the concept of Self or the idea of God, must be and can be judged by the criterion of individuality.[2]

There remains only one great problem to discuss before we can regard the account of Mr. Bradley's Metaphysics as complete. The sole *raison d'être* of the whole theory of 'Degrees' is to explain, *how* the appearances may be contained in the Reality and yet not be fully real. It is an attempt to preserve to the appearances their half real, half unreal character—an attempt forced upon Mr. Bradley by his doctrine, that a self-consistent reality, if it is to be self-consistent, must *include* the appearances and yet cannot *be* its appearances.

[1] *Cf. Appearance and Reality*, p. 370.
[2] For further details see chap. xxiv. of *Appearance and Reality*.

About this doctrine we must ask a crucial question. Is there no appearance which is *in principle* opposed to the conception of the Absolute put forward by Mr. Bradley? Is there no appearance which refuses flatly to be viewed as an appearance of just this Absolute? Will Error, for instance, and Evil, and Time, and Space, and many more, allow themselves to be transmuted into harmony and system? Is there any positive evidence which makes it likely? The need of such positive evidence is obviously the greater in view of our admitted ignorance of the concrete way in which particular appearances are *actually* transmuted in the Absolute. It seems then quite possible, that there are appearances which will never admit of such a transmutation.

Mr. Bradley faces the difficulty boldly, and his way out of it is as ingenious as his case is weak. Positive evidence he has little, and that mostly questionable. I shall deal with it later. Nor does he really rest his case on it.[1] His real position stated in all its nakedness is simply this: There is *no proof* of any appearance being irreconcilable with the Absolute; the conception of the Absolute demands that all shall be reconcilable, hence—all must be reconciled. Absence of negative evidence plus a positive postulate issues in actuality: 'what *may* be, if it also *must* be, assuredly *is*'.[2]

I have called Mr. Bradley's case weak, and yet the basis of his argument is quite sound: 'A general doctrine is not destroyed by what we fail to understand. It is destroyed only by that which we actually do understand, and can show to be inconsistent and discrepant with the theory adopted.'[3] In other words, only true negative instances, *i.e.*, instances which, *fully understood*, are seen to involve a principle directly opposed to our theory, can upset that theory. Its mere failure to explain any particular fact is no argument against it, for this fact, better understood, might reveal itself as an instance of the theory. Apparently then, all Mr. Bradley has to do is to show, that Error, Evil, etc., are not negative instances, and it follows at once from the self-consistency of the Absolute, that nothing but our ignorance prevents us from seeing that they are positive instances *for* the Absolute.

But this is the flaw in the argument: A theory which is not damaged by its apparent inapplicability to a particular

[1] What I call Mr. Bradley's positive evidence is really no more than an attempt to show that there is *no* negative evidence. Indeed, since our ignorance of the concrete details of the Absolute forbids us to say that any way of transmutation, which we can imagine, is the one actually used, Mr. Bradley could not possibly do more than that.

[2] *Appearance and Reality*, p. 199. [3] *Ibid.*, p. 185.

instance, must have first justified itself and established its validity by its applicability to the *majority* of instances. In Science we certainly do not abandon a theory which explains all old facts, because a particular new fact refuses to fall in with it, *unless* further observation and analysis prove that the new fact involves a new principle. But what does the Absolute explain? Or where has it established its validity? The whole range of experience is nothing but appearance. Error and evil and other appearances are not isolated instances of failure, which do not weigh in the scale by the side of the appearances which the Absolute does explain. Why, Truth and goodness, nay, the very idea of the Absolute itself, are nothing but appearances.[1] The best that we can say of all of them is that they are 'somehow' 'preserved but transmuted' in the Absolute. But there is not one appearance in the case of which this convenient 'somehow' can be filled with a definite meaning. If it could, one would gladly accept all the rest on trust and hope for further insight. As it is, only our want of insight prevents us from construing many appearances as negative instances. Human ignorance is indeed the fundamental fact, the corner-stone of Mr. Bradley's argument. It is just because we do not know why appearances should not ultimately be consistent that we can demand that consistency. It is just because experience is admittedly incomplete that we can postulate its completion in a particular direction. Of course, a valid postulate, since it takes us into the region of possibilities, must, like all possibilities, be based on some feature in the actual. Actual experience presents characters both of inconsistency and consistency, and it is by laying stress on the latter aspect, on the movement of thought towards consistency and on the valuation of experience according to the degree of its consistency, that we can find reality 'foreshadowed' even now. But for Mr. Bradley the self-consistency of the Absolute is not a postulate but a *fact*, a piece of positive knowledge, and yet, since he maintains that all our thought and knowledge, even at their best, are still appearance, this knowledge of the Absolute seems infected with a similar weakness. If all is appearance, how can he get at Reality? And yet he could only show all to be appearance by first making an assumption about Reality! Nor can Mr. Bradley escape from this dilemma by insisting on the double character of an appearance as partly real, partly unreal. For,

[1] *Appearance and Reality*, p. 397. Mr. Bradley hedges by adding 'as idea'—but we have nothing else. What are 'self-consistency' and the other attributes of the Absolute if not 'ideas'?

apart from the question of transmutation, which more or less alters the character of the appearance, we can even in its present state only decide what is real if we have previously decided the nature of Reality. It follows that the standard by which we judge appearances cannot itself be an appearance, and that thought in this one particular, at any rate, must reach *beyond its character as appearance* and come into touch with reality as it is in itself. But can Mr. Bradley with a good conscience admit that? The whole difficulty arises from the fact that the Absolute being higher than all appearances cannot properly be described from the point of view of an appearance. Thought moves in relations: the Absolute is beyond relations. Hence any attempt to describe it in relational terms is bound to lead to contradictions. We must deny in the same breath what we affirm. The Absolute 'is' and 'has' and 'includes' and 'transmutes' and 'submerges' and 'does' a thousand other things which all imply *relation*, and yet it is beyond and above all relations. Its very character of self-consistency implies relation, and yet is used to describe its supra-relational nature. It is therefore not strictly 'related' to any of its appearances. The very distinction between appearances and reality is strictly speaking illegitimate, and yet but for it where would be Mr. Bradley's philosophy? From the point of view of the Absolute we cannot speak of 'appearances'. For appearances have there ceased to exist, at any rate *as* appearances. Yet, on the other hand, it is hard to see how an appearance, whilst remaining an appearance, can know itself to be more than a mere appearance, can know itself, that is, to be an appearance of a reality defined as Mr. Bradley does define it. An appearance is partly real, partly unreal, to the philosopher who studies it in the light of his conception of reality, but, if the philosopher by the force of his own reasoning is compelled to declare himself an 'appearance,' has he not thereby renounced his right to make the distinction between appearance and reality on which his whole argument rests? The difficulty is similar to that which besets certain epistemological theories, and to which Avenarius has given the name of 'introjection'. Having first argued that, because a given object is outside a given individual's body, the individual can only know it by means of 'inner states' or 'subjective affections' which represent the object; and having then identified *myself* with that individual, I suddenly find myself confined to my 'inner' states and unable to get back to the 'outer' objects, on which my whole theory depended. So here. If we first

make a distinction between appearance and reality and then range ourselves among the appearances, we cannot get back to reality. The whole force of Mr. Bradley's argument rests on our ability to take up at will either the point of view of the Absolute or that of a 'mere' appearance, but when we hear that all our experience, all our thought, is appearance, the point of view of the Absolute seems to become impossible for us. And yet, but for this point of view, we could not have recognised the appearances as appearances. What escape is there from this circle?

And when we turn to the positive evidence which Mr. Bradley adduces to show that there is nothing in appearances like Evil and Error to forbid their taking a place in the Absolute, we only seem involved in new difficulties. I will take first the case of *Pain*. It is clear that pain exists, and it is equally clear that 'as such' it cannot exist in the Absolute. 'Hence . . . the question is, whether its nature can be transmuted? Can its painfulness disappear in a higher unity? If so, it will exist but will have ceased to be pain when considered on the whole.'[1] The phrase 'considered on the whole' is curious. One would have thought it was a matter not of consideration but of *feeling*. And what does the vague 'on the whole' mean? In explanation Mr. Bradley appeals to our actual experience of the 'neutralisation of pain'. Psychology knows of cases in which small pains are 'wholly swallowed up in a larger composite pleasure. And the assertion that, in all these cases, they have been *destroyed* and not *merged*, would most certainly be baseless. To suppose that my condition is never pleasant on the whole, while I still have an *actual* local pain, is directly opposed to fact. In a composite state the pain doubtless will detract from the pleasure, but still we may have a resultant which is pleasurable *wholly*. Such a balance is all that we want in the case of absolute perfection.'[2] And presently the argument is summed up: 'We have found, so far, that there is a possibility of *pain ceasing, as such*, to exist in the Absolute'.[3]

I have quoted at some length to show to what straits Mr. Bradley is reduced in trying to defend his theory at all costs. Observe, above all, the astounding vagueness and looseness of his terms. How can a pain be 'actual' and yet cease to exist 'as such'? How can it be 'merged' and yet continue to be *felt* as pain? For that is the point. Does the pain continue to be *felt* or not? If not, we have no longer any

[1] *Appearance and Reality*, p. 198. [2] *Ibid.* [3] *Ibid.*, p. 199.

right to speak of it as pain, though the physical conditions which gave rise to it may continue. It is mere shirking of the difficulty to talk about 'merging' and 'neutralisation'. Does the warmth of the rest of my body 'neutralise' cold feet? Or is such a mixed state in spite of its balance of warmth a 'perfect' or ideal state? Mr. Bradley is too good a Psychologist not to know that pain and pleasure do not neutralise each other as + and − do in Mathematics. A 'neutral' or 'indifferent' state is not one in which pain and pleasure are so equally mixed that we do not feel either. Nor do we in a state which is on the whole pleasurably toned, but with a slight admixture of pain, feel only the balance of pleasure which remains after deducting the pain. Such a deduction is a psychological absurdity. Hence, so long as the pain continues to be felt, it has not ceased *as such*, however pleasurable our state may be 'on the whole,' and when it has ceased to be felt, it has gone altogether, and our state is 'wholly' pleasurable. Mr. Bradley's use of 'wholly,' on the other hand, looks like a deliberate attempt to mislead, for, apparently used only as a synonym for 'on the whole,' it suggests in the context its more natural meaning of 'completely,' as if any mixed state could be 'completely' pleasurable in the sense of the balance of pleasure over pain *alone* being felt.

Or, again, take the case of *Error*. To go fully into Mr. Bradley's doctrine of error would take us too far and would mostly not be to the point here. Hence I will only dwell on its main aspects, because it is at the same time a beautiful test-case for illustrating by anticipation the different point of view and method of Pragmatism in dealing with such problems. Such a concrete comparison will be more instructive than pages of exposition. The point which strikes one most is Mr. Bradley's curiously *impersonal* way of treating error. The usual view of error is, that it is an opinion or statement in conflict with facts. It is the *opinion* which—though, perhaps, in itself consistent—is false and erroneous. The facts are true and real. Hence the usual criterion of Error is disagreement with facts. For Mr. Bradley, however, error as a form of 'appearance' must be condemned by its *inner inconsistency*, and such a self-contradiction in its inner content can only be secured, if the content includes not only the false opinion, but the facts, with which the opinion disagrees, *as well*. We then have reality qualified on the one hand by certain facts and on the other by an opinion not in accordance with those facts, and this *total* qualification obviously contains inner self-discrepancy and is therefore

appearance. The conflict of opinion and fact is a crude instance of error. In the end, since Reality has a self-consistent character, *every* partial aspect of it is, to some extent, erroneous, for the result of qualifying the whole reality by merely this aspect involves an obvious inconsistency.[1] From this point of view Mr. Bradley is able to declare *all* appearances as more or less infected with error, and, since even truth is an appearance, it follows that the absolute opposition of truth and error is smoothed down into the relative one of true and false appearance: 'There will be no truth which is entirely true, just as there will be no error which is totally false. With all alike, if taken strictly, it will be a question of amount and will be a matter of more or less.'[2]

Apart from thus bridging the gap between truth and error, Mr. Bradley's theory of error also enables him to deal with opinions of the erroneous nature of which we are ourselves *unaware*. The usual view is: 'Error is truth until it is found out to be error'. That such a view is impossible on Mr. Bradley's principles is clear. For whether we are aware of the wrongness of a statement or not—it qualifies reality no less than the object with which it deals and thus introduces internal inconsistency.

And lastly, this view of error opposes no difficulties to its correction in the Absolute. The self-discrepant content is as an element in a wider whole, so rearranged and modified as to become harmonious: 'Instead of one subject distracted, we get a larger subject with distinctions, and so the tension is removed'.[3]

It will be clear by now, why I described Mr. Bradley's treatment of error as 'impersonal'. He treats error *metaphysically*, as an apparent discrepancy in the real. He does not treat error *epistemologically*, as if he were answering the questions: What is error for *us?* And how can *we* remove it or find it out? The erroneous opinion is taken out of its personal context, and stripped of its personal significance—merely its place in the real is considered. Hence Mr. Bradley argues, that disagreement with fact is an insufficient criterion (i.) because in many cases it does not work at all, *i.e.*, the disagreement is never experienced by us, and yet the error, though uncorrected for us, does not survive, as such, in the Absolute; (ii.) because the facts themselves are for him but appearances infected with contradiction, and agreement with them could not, therefore, secure complete truth.

[1] *Cf. Appearance and Reality*, p. 189: 'Error is the qualification of a reality in such a way that in the result it has an inconsistent content'.
[2] *Ibid.*, p. 362. [3] *Ibid.*, p. 192.

As against this doctrine Pragmatism takes in almost every detail the opposite point of view, the epistemological, personal point of view. With the reconciliation of undiscovered errors in the Absolute it is not concerned. An error which is not known to be an error does not exist for it, as error, at all. Until a statement is discovered to be false, it passes either as true, or as provisionally true (assumption, hypothesis, postulate), or as indifferent, *i.e.*, as a case in which we deliberately remain in suspense and refuse to commit ourselves. And the only problem it raises about error is: How do we find out whether a statement or opinion is erroneous? And the answer is: By acting *as* if it were true and trying whether it collides with other facts or features of our experience. However this is merely the rough kernel of the answer, which must be hewn into shape. It is an answer, as it were, only for extreme cases. It applies only to that fringe of knowledge where truth is still in the making. The Pragmatist, like any other mortal, will, as a rule, reject a statement as false which is inconsistent with a large body of accepted facts and theories, which long trial and experience have shown to be true and confirmed by the practical test of success. Thus, if some one were to affirm that powder is not an explosive, no Pragmatist will refute him by the practical test of blowing himself up. In such cases the Pragmatist will apply the criterion of contradiction like any one else: the statement is inconsistent with accepted truth—hence it is false. If he is 'practical' in such a case, it is only in saving himself trouble by appealing to past experience. But it is different in cases where a fact is not inconsistent with anything that was known already and is yet found upon further experience to have been false; or where a fact is in conflict with past knowledge and will not yield even to further study and insight, so that the error is seen to lie on the side of what had been accepted up to then as truth. In either case, the Pragmatist urges, that the criterion and the procedure are *practical*. Thus if a new fact conflicts with an accepted theory, we first try every means to bring the fact under the theory, and only if that shows itself to be impracticable do we modify our theory so as to include the new without ceasing to explain the old. In other cases, where an error does not reveal itself through its conflict with other knowledge, we only discover it by the consequences of its application, *i.e.*, by the results we obtain, when we act on the assumption that it is true. Thus, to take Mr. Bradley's instance:[1] William has been hung, but I erroneously suppose

[1] *Appearance and Reality*, p. 190.

it was John. Unless I am accidentally corrected, I shall only discover my error, if I act, as if John had been hung and William were alive, *e.g.*, if I write a letter of sympathy to John's family and expect William to pay his debts on the morrow. The results of my action will teach me to my cost that I was in error. This is a crude instance, and there are undoubtedly numberless cases in which we accept correction, though the truth or error of a statement or opinion cannot apparently make the least practical difference to us. What does it concern the ordinary man, whether he holds a true or a false theory of radio-activity or knows rightly the number of satellites of the planet Jupiter? But to the physicist or astronomer truth in these matters is of the greatest 'practical' importance, if their theories, experiments, calculations are to agree with each other and with their observations. For on the consistency of a scientific body of facts and theories largely depends its practical value, just as the consistency itself has been secured by practical tests: by applying the knowledge gained and accepting or rejecting it according to the results of its working. An incoherent collection of contradictory observations and guesses is not practically applicable at all. Hence it would be false in speaking of the practical value of knowledge to take too narrow a point of view. It would be sheer absurdity to ask of any remote and out-of-the-way bit of knowledge: What is its practical value? What does it help you to do? By such a method the greater part of our knowledge could be shown to have no 'practical' value at all, however wide a sense we give to the word. But granted that knowledge as a whole possesses practical value, in the sense that it is man's greatest interest to get to know the world in which he has to live as thoroughly as possible, then we need not raise the question of the practical importance of this or that detail, but can legitimately argue that its position is secured through its being an element in a wider whole.

Thus Pragmatism finds the guarantee of the truth even of accepted knowledge not so much in its consistency as in its continual confirmation and verification by being applied to the solution of actual problems. And similarly a new theory which presents itself for our acceptance can establish its claim to be regarded as true only by its success in working. Its failure stamps it as error. For Mr. Bradley the problem of error is: How is its existence compatible with the perfection of the Absolute? for the Pragmatist: By what method and what marks do we discover it? The Pragmatist is concerned with the elimination of error in

the progress of human knowledge, for Mr. Bradley it is a question of no importance whether *we* correct our errors or not, so long as he can show that they *must* be corrected in the Absolute. Hence the reproach against the Absolute that it 'explains nothing' and is no help to us in our problems.[1] And even if we do not press this objection here, a grave difficulty does undoubtedly arise for Mr. Bradley out of his neglect of our human attitude towards error. For it may be asked: What significance for the Absolute has the fact that in the progress of knowledge errors *do* get eliminated and disappear altogether? Science hardly troubles to remember erroneous theories at all, philosophy remembers them for the truth they contained and as danger-signals where they were false, and thousands of ordinary, every-day errors once corrected literally disappear altogether. And yet they have existed, they have been facts, they have 'qualified reality'. Mr. Bradley deals with error only as if it were a *permanent fixture*, indissoluble for us, though solved in the Absolute. Indeed its indissolubility contributes to the harmony of the Absolute: 'the one-sided emphasis of error, its isolation as positive and indissoluble in a wider connexion—this again will contribute, we know not how, to the harmony of the Absolute'.[2] Similarly, I suppose, Mr. Bradley would say, that the gradual correction of errors in the progress of knowledge 'contributes, we know not how, to the harmony of the Absolute'. But such an argument is unsatisfactory. Though it is possible to say that an error, even after its correction by us, still continues to qualify reality in its corrected form, the *fact* of its correction, which also qualifies reality, remains to be dealt with. We should naturally be inclined to describe the removal of error as an increase in perfection, but since the Absolute *is* perfect, any increase of perfection on the part of one of its appearances cannot, we are told, make any difference to the whole. For the appearance, we must remember, is a partial aspect of the whole, and a more perfect appearance is, therefore, a wider and completer aspect of the whole, but that obviously does not affect the perfection of the whole. And it is not the correction of error alone which thus loses all significance from the point of view of the Absolute. By parity of reason-

[1] Mr. Bradley deals with the question how *we* correct our errors in a—footnote! (*Appearance and Reality*, p. 543). What he says there is excellent, but it leaves untouched the question which I am going on to raise, what significance the fact that *we* correct errors has for the Absolute, where they are all corrected anyhow.

[2] *Appearance and Reality*, p. 195.

ing any form of progress, all moral struggle, all realisation of ideals, in short, all that makes life valuable to us, all that to us is of the greatest practical importance, is from the point of view of the Absolute of no account. And if any one, unwilling to accept these consequences of Absolutism, were to recall to Mr. Bradley the passage quoted above about the need of 'satisfying our whole nature,' he would find himself at once rebuked as follows: 'Philosophy, I agree, has to justify the various sides of our life; but this is impossible, I would urge, if any side is made absolute. Our attitudes in life give place ceaselessly the one to the other, and life is satisfied if each in its own field is allowed supremacy. Now to deny the progress of the Universe surely leaves morality where it was. A man has his self or his world, about to make an advance (he may hope) through his personal effort, or in any case (he knows well) to be made the best of. The universe is, so far, worse through his failure; it is better, so far, through his success. And if, not content with this, he demands to alter the universe at large, he should at least invoke neither reason nor religion nor morality. . . . Faith in the progress or persistence of those who inhabit our planet has nothing to do with metaphysics.'[1] No one can deny that this passage is perfectly consistent with the rest of Mr. Bradley's metaphysical teaching, but at the same time it illustrates how complete is the opposition (on which I dwelt above) between the view-point of appearance and that of reality, and how little the one is organically connected with the other, since Mr. Bradley's Absolutism fails to give a real meaning to those very aspects of our life which to us are fullest of meaning and value.

But to return to the problem of progress, we may look at it from another point of view, *viz.*, so far as it involves a process, a change, in a word: Time. And thus we are launched on the consideration of that appearance, which of all appearances is the most troublesome to a timeless Absolute. For time in one form or another, as succession, change, development, decay, progress, etc., forms a fundamental character of all *our* experience, and it is just this character, which is most incompatible, as such, with the Absolute. Most of the inconsistencies for the sake of which various conceptions had to be condemned as appearances, rested ultimately on the connexion of those conceptions with time. This is obvious in the case of the dynamic conceptions, like causality, which deal directly with processes, but it is no

[1] *Appearance and Reality*, p. 501.

less true of the static conceptions like thing-quality, by means of which we try to isolate in the stream of experience certain complexes as more or less fixed, and to create islands of permanence in the ocean of change.[1]

Since the problem is so fundamental, it may be worth while, in this case, to consider its treatment by other modern Absolutists besides Mr. Bradley. Mr. Bradley deals with Time in his usual way. He first shows it to be inconsistent and therefore not real, and then tries to show that it contains nothing incompatible with its existence as 'somehow' transmuted in the Absolute. But he flatly declines to consider the problems, (1) why there should be an appearance of the character of time at all;[2] (2) what its character is as transmuted in the Absolute. His position, if unsatisfying to our desire for knowledge, has, at any rate, the merit of being consistent. Since the 'habits of the Absolute'[3] are beyond our ken—as no one could urge more strongly than Mr. Bradley himself—both problems are manifestly insoluble. But since the raising of unanswerable puzzles will never content the human mind, we find other Absolutists attempting to answer both.

Prof. Royce[4] tries to show us how to conceive the *timelessness* of the Absolute. The attempt is interesting because it is based on an undoubted feature of the temporal human consciousness, *viz.*, the 'time-span'. A sequence, he argues, may be 'present' to us in two ways: (i.) as a whole, *totum simul;* (ii.) it may come before us bit by bit. A tune, for instance, is experienced tone by tone, and each tone comes to us as a member of the whole tune, and yet at the end in the total impression the whole tune may be said to be present as a whole, and so far in a timeless manner. This apprehension of the members of a *successive* series in *one* moment of consciousness, *i.e.*, the so-called 'specious present,' depends on the length of the human time-span. Some series are too long, others too short for our time-span; some we cannot grasp as a whole, in others the succession escapes us altogether. But there is no difficulty in conceiving of a consciousness free from the

[1] *Cf.* also Prof. Taylor's remark: 'In the *temporal* character of all finite experience we may perhaps discern the ultimate grounds of Morality' (*Elements of Met.*, p. 263).

[2] *Cf. Appearance and Reality*, p. 511: 'why there are appearances, and why appearances of such various kinds, are questions not to be answered'.

[3] The phrase is Mr. Schiller's.

[4] *E.g.*, in his lecture on 'Immortality'.

limitations of the human time-span, a consciousness to which all time, past, present and future, including even the minutest details of its content, should be present *at once*, in *one* specious present, in an 'eternal now'. Thus the human time-span is the *type* of the timeless experience of the Absolute.

Is the analogy really tenable? To answer this question we must briefly dip into the Psychology of the matter. The time-span is closely connected with the phenomena of *attention*, and especially with what is known as the 'oscillation' of attention. We find it impossible even with the greatest effort of conscious attention to fix our minds unwaveringly on a given object. Any one can observe this by trying to fix an object on the table steadily for some time and noticing the tendency of his eyes to be drawn off and to wander right and left. And it is the same when we try to concentrate our minds on a given thought. One moment the thought is very vivid, in the next the mind has wandered off to different matters, and one can distinctly observe the thought returning to one's consciousness, as one catches oneself on having gone off the point. The time-span, then, may be defined as the stretch of concentrated attention between two oscillations. Now, even in such a stretch of clear attention, it depends very much on the number and nature of the impressions, and the momentary interest, what one notices. If their number is overwhelming or none are sufficiently differentiated from the rest, they fuse into one vague total impression, in which nothing is clearly distinguished. Or if the attention *selects* certain features, then the rest forms a confused background to the objects in the focus of attention.

Without elaborating this further, we can see that in these characteristics the time-span cannot serve as a type of the timeless experience. For we hear, that no details are to be dropped—and this proviso at once excludes all confusion, all hazy total impressions. But if every detail stands out clearly and distinctly, it seems to follow, that all things great and small, important and unimportant, essential and subordinate, are reduced to a level, in which no outstanding features, no prominent complexes can be distinguished, just because all things would be equally distinct. In other words, the multiplicity of content of the timeless experience would not be organised, it would lack structure and system. There would be nothing in it corresponding to the *selective* power of human attention. Hence we should have to introduce a principle into the timeless experience, which, whilst preserving distinction and clearness, yet differentiates its content

according to its metaphysical value. The problem is not solved by merely reducing succession to simultaneity: we further require to understand that simultaneity of details as the expression of a single coherent system.

Moreover the reduction of succession to simultaneity, if fully thought out, is seen to be full of difficulties. To the completeness of any series apprehended *totum simul*, and yet without dropping details, it is, as we have seen, essential that each member should survive as a distinct element in the whole. We can imagine a tune spread out in this way, tone following tone. But apply this idea to any process of growth or development, and observe the result. Does the embryo, the baby, the boy survive in the timeless experience as a distinct element side by side with the man, the dotard and the corpse? Surely the idea is absurd!

And there is a last point. In the case of the tune the difficulty is not really solved by thinking succession away and placing the notes, as it were, side by side. For the effectiveness of the tune just depends on the *successive* experience of single tones, on the gradual accumulation of the total impression.[1] The 'specious-present' theory makes no allowance for the fact that a tune (and, for that matter, any series forming a whole) is not merely a collection of atomic elements, but that each new member is enriched, as it enters, by the total effect of all preceding ones. The mistake arises entirely from the fact that the simultaneity to which succession is supposed to be reduced, really involves a *spatial* metaphor. The successive stages are thought of as *side by side*, instead of as one after the other. But, if we are serious about this, what is the result? Play all tones of a tune together and you produce simply a noise. Imagine all stages of development side by side in the same human being and you produce simply a monster.

In fact, there seems to be a serious psychological confusion between the absence of change in our attitude of attention during the time-span, and the supposed absence of change or succession in the object attended to. *Unchanging attention is not the same as experience of the unchanging.* We do experience succession even within the same stretch of unwavering attention, hence we cannot get rid of process and change by simply expanding the time-span to an all-inclusive, eternal Now. No strict simultaneity, which does not derive its sole intelligibility from an illegitimate spatial metaphor, can be

[1] *Cf.* here Prof. Stout's *Manual of Psychology*, bk. I., chap. ii., on the Acquisition of Meaning.

reached by these means. To take again the instance of the tune: though we may during a time-span still experience the first tone (just dying away) as the last one enters, we shall never succeed in experiencing the last *already* as the first one enters. The last experience will always come *later* than the first, and hence we cannot get rid of succession by extending the time-span ever so much. In my judgment, therefore, the analogy of the time-span fails to make the timelessness of the Absolute intelligible.[1]

Prof. A. E. Taylor has made an attempt to solve the second of our two problems, *viz.*, *why* there should be an appearance of the character of Time at all. That he realises the unsatisfactoriness of Mr. Bradley's position is shown by the following quotation:[2] 'We have finally to ask, Of what are they[3] the appearance? It is not enough to say "of ultimate Reality" or "of the Absolute". *Ultimately* this is, no doubt, true of Space and Time, as it is of everything else, but we desire further to know, if they are not *proximately* the appearance of some special features of the inner physical[4] life of the lesser individuals which compose the Absolute. We naturally look for some third term, in the nature of finite individuality, to mediate between the structureless, abstract generality of space and time relation, and the perfect individual structure of the spaceless and timeless Absolute Individual.'

He then proceeds to show how he regards Space and Time as the inevitable results of the limitations of finite experience to 'a unique *here* and *now* of immediate feeling'.[5] It is only because we can only take in a very small bit of the world in any one moment of experience, that we arrange the rest in Space and Time, *i.e.*, contrast 'there's with the 'here,' and 'before's and 'after's with the 'now' of present experience. Except for the limitations of our range of conscious experience, such a contrast would have no meaning. Hence in the experience of the Absolute which embraces all, there can be no opposition of here and there, now and then, and therefore neither Space nor Time. Both Space and Time are thus the external and phenomenal manifestation of underlying *logical* relations and *logical* development. 'The spatial grouping,' for instance, 'of intelligent purposive beings is phenomenal

[1] Mr. Bradley himself shows that perception of succession is itself always successive (*Appearance and Reality*, p. 51).

[2] *Elements of Met.*, p. 260. [3] *Viz.*, Time and Space.

[4] What does Prof. Taylor mean by 'inner physical'? It seems a strange combination. Perhaps a slip for 'psychical'.

[5] *Elements of Met.*, p. 261.

of their inner *logical* affinity of interest and purpose.'[1] And similarly: 'the position of a particular purposive act in the temporal series of acts which I call the history of my own life, is the outward indication of the *logical* place filled by this particular act in the connected scheme of interests which form my life on its inner side'.[2]

It will be remembered from the preceding discussion of Mr. Bradley's Absolute and its appearances, that *all* appearances are essential to Reality, since Reality exists nowhere except in its appearances.[3] Mr. Bradley only uses this principle to infer that we cannot neglect or refuse to attribute to the Absolute any appearance, however incompatible with the nature of the Absolute it appears to be, without leaving out a necessary aspect and making Reality incomplete. But really the principle ought to imply much more than that: *viz.*, that it is essential to the nature of the Absolute to manifest itself in just these appearances and no others. In other words, we ought to be able to *explain* the appearances by means of the Absolute; it ought to be a principle showing why there are appearances at all, and what each contributes to the wealth of meaning of the Absolute. Mr. Bradley's Absolute with its purely formal characteristics of self-consistency, unity, and system, is much too abstract to supply such a principle; hence Mr. Bradley wisely declines to 'deduce' the appearances. Neither does Prof. Taylor connect Time and Space directly with the Absolute, though he admits, that 'ultimately' they are manifestations of the Absolute. He explains them 'proximately' as inseparable from finite individuality, but that leaves on our hands the problem, why the Absolute manifests itself in a multiplicity of finite individuals. And until this problem is solved, the full reason why Time and Space are essential manifestations of the Absolute has not yet been given.

Moreover, does Prof. Taylor's explanation of Time and Space as the phenomenal aspect of inner logical relations really justify the inference to a timeless Absolute? The truth in Prof. Taylor's view is, that undoubtedly a *purely* temporal or spatial experience would give us very little knowledge about the world and would truly be an 'outside' view of things. We undoubtedly try to find a deeper meaning in temporal processes and spatial relations, but the fuller understanding of things, at which we thus arrive, contains nothing to make our experience less temporal or spatial. Logical

[1] *Elements of Met.*, p. 261. [2] *Ibid.*, p. 262.
[3] *Cf. e.g.*, *Appearance and Reality*, p. 487.

relations certainly are timeless. When I say A follows from B I do not give the word 'follows' a temporal sense, and for Logic, which investigates the conditions under which a thought is true or valid, the fact that all thought is a process in time, is certainly accidental and negligible. But that does not warrant the inference, that there must be an experience of this purely logical character, for which Time and Space are 'transmuted,' or 'swallowed up,' or 'rearranged,' so as to have completely lost their temporal and spatial character. What intelligible meaning can be given to such phrases? The fact is, that Time and Space cannot be ruled out of experience, and that yet in their present character they cannot be reconciled with a timeless and spaceless Absolute, hence the incompatibility is hidden beneath unintelligible metaphors. If the purely temporal aspect of things is external and abstract, the purely *logical* one, if less external, is certainly no less abstract. The fullest possible understanding, as far as I can see, would not transcend the temporal character of experience in the sense of doing away with it. We 'see through it,' in a sense, and grasp the deeper meaning which manifests itself *in*—and I should almost like to add '*by means of*'—it. But there is nothing to show that we can have the meaning without the process, though we can abstract the meaning from the process and consider it by itself. Rather one might argue that the process is essential to the expression of the meaning. The Absolute may be timeless, but Prof. Taylor's arguments do not go to show it.

I have discussed the Absolutist treatment of Time at such length, that there is no need to add much to what I have already said about Mr. Bradley's handling of the subject. As usual Mr. Bradley excels in destructive criticism but fails in the positive building up. His discussion of the difficulties involved in the conception of Time is very instructive, but he makes no positive contribution to their solution. He is much more ready to discover inconsistencies than to remove them. He has to show that Time involves no principle opposed to its transmutation in the Absolute, and he dwells for this purpose on the relativity of change to something permanent; on the difficult problem of the reality of the past and the future in view of the fact that the reality of the present alone is guaranteed by its content of living experience, and that Science in formulating its laws treats 'facts from various dates as all possessing the same value';[1] and lastly on the timeless nature of truth: we

[1] *Appearance and Reality*, p. 208.

accept what is true once for true always, and our 'universals' are taken out of their temporal context. Thus Mr. Bradley endeavours to prove that in various ways we try to get beyond time at a timeless Reality, and that 'succession as such, can be treated as something *without rights and as mere appearance*'.[1]

This is, no doubt, one side of the matter. But is it the whole? Do we desire the timeless for its own sake, *i.e.*, just because in it we have at last got rid of time, or do we not rather desire it that we may the better understand the Time-process? It is hardly true, as Mr. Bradley says, that 'for Science reality tries to be timeless'.[2] For Science only abstracts from time, it only formulates its conceptions and laws apart from their particular temporal setting in any given case, that it may be the better able to understand and control the succession of phenomena in time.[3] So far from regarding its abstract, universal, timeless conceptions as *more real* than the concrete, particular world in time, it maintains rather the opposite; 'Die Wirklichkeit ist jedesmal nur einzig,'[4] says Prof. Ostwald, and it is just the unachieved ideal of Science to grasp fully and to exhaust the unique individuality of events in the Time-series, to be able to predict down to the minutest detail what consequences will follow *in time* from the condition of things given in the present. Science is no longer content with classification and generalisation involving, as they do, the neglect of small differences in the particulars of observation. It has learned from the theory of evolution, that these very differences, apparently so unimportant, may grow into—if they do not yet actually constitute—'specific' differences, of which any attempt at classification must take account. It cannot be denied that, since the rise of the evolutionary sciences, the ideals of Science and of History have approached more closely to each other. But, if so, it cannot be said that Science has no concern with the past or the future. Time is real to it as it is to the husbandman who puts seed into the ground in the expectation of a harvest in the future, or in fact, to any one who makes arrangements in the present from which he hopes to benefit in time to come. This may be what Mr. Bradley would call an 'illegitimate appeal to

[1] *Appearance and Reality*, p. 208. The Italics are my own.
[2] *Ibid.*, p. 208.
[3] *Cf.* the construction by Science of an *objective* time over against all subjective times of individual experiences. This does not look as if Reality were timeless for Science!
[4] *Vorlesungen über Naturphilosophie*, p. 140.

practice,' but surely mere theory in abstraction from practice is as little likely to give us truth about reality as mere living without reflexion. Most of the dialectical difficulties raised about Time suggest the attitude of a man who standing on a bridge looks down on the water rushing through underneath and says: 'I cannot understand how it is that I see water here at all. For the water which is coming is not yet here, and that which has gone is no longer here.' And if he fines down his 'here' sufficiently, the imagined difficulty becomes obviously insoluble.[1] Similarly the Time-process is insoluble to all who stand on the bridge of timeless conceptions. In short, since our life and experience are 'in time' and seem inseparable from time, time cannot be 'without rights'. We abstract from the time-process, we form timeless conceptions and laws and treat truth as true at all times, because the content of our experience at any one time, *i.e.*, the merely 'given,' is incomplete and fragmentary, and we bring to bear on it in the shape of timeless truths the contents of past experience, and thus, by addition and interpretation and inference, we invest the given with a wealth of meaning, which, as such, it does not possess. But the temporal character of our experience is in no wise changed by our ability thus to expand the content of the present with memories of the past and anticipations of the future. And, even if it were, it would yet remain true that Mr. Bradley's solution of the problems of time by assuming its 'thorough,'[2] but to us unintelligible, transmutation in the Absolute, in which its special temporal nature is 'lost,' leaves us as wise as we were before. It amounts to saying to us: In practice you may be as inconsistent as you find it convenient to be, provided you believe in the reconciliation of all contradictions in the Absolute. Of the fact, that it is one of our 'practical' concerns to remove inconsistencies here and now, once they have been pointed out to us, Mr. Bradley takes no notice.

The case is not much better with other appearances, the compatibility of which with the Absolute Mr. Bradley tries to exhibit. The precariousness of his arguments can be discovered at once by trying to give a definite meaning to the numberless 'on the wholes and 'somehows and 'as such's,

[1] Mr. Bradley as usual courageously accepts the result. *Cf. Appearance and Reality*, p. 312, where he invites the reader to define 'a body moving at a certain rate . . . *without predicating of the present what is either past or future*'. The reader will find a parallel to the argument in the text in Prof. Ward's *Naturalism and Agnosticism*, vol. ii., p. 244, where he defends the 'reality' of activity against Mr. Bradley.

[2] *Appearance and Reality*, p. 210.

which give an appearance of intelligibility to his paradoxes. It is much the same with the metaphors of 'transmutation' and 'submersion,' which Mr. Bradley uses to express, that all things must 'survive' in the Absolute, but cannot do so in the distinctive character which they possess for us. They are appearances for us, but the Absolute is 'the unity in which all things, coming together, are transmuted, in which they are changed all alike, though not changed equally'.[1] Thus on the one hand all appearances belong to reality, and on the other they do not *as such* belong to reality, *i.e.*, in the distinctive character in which we know them. Mr. Bradley quite recognises this: 'it is only by a licence that the subject-systems . . . can be made qualities of Reality. It is always under correction and on sufferance, that we term the universe either beautiful or moral or true.'[2] And still greater is the licence in the case of ugliness and evil and error, which are only 'subordinate aspects' of beauty and goodness and truth. But from this it follows surely that we can predicate appearances of the Absolute only from the point of view of the appearances, whereas from the point of view of the Absolute there are no appearances at all, for the 'Absolute is perfect in all its detail!'[3] Or put differently: Error and Truth, Evil and Goodness, and all other appearances have a meaning for us only in the sphere of appearances. As transmuted in the Absolute and stripped of their 'distinctive character' in whatever degree, they have no longer any intelligible meaning for us. I, at any rate, fail to understand what can be meant by a pain which has ceased to exist *as pain* and yet continues to bear the name pain, or by an error which is said to qualify the Absolute and yet in so doing is changed into something which cannot on any condition be called error.[4] It is the old trouble: we cannot consistently describe an Absolute which is beyond any and all its appearances in terms which

[1] *Appearance and Reality*, p. 488. [2] *Ibid.*, p. 489. [3] *Ibid.*, p. 401.

[4] *Cf.* the passage (p. 365) in which Mr. Bradley says of error, that 'when it is turned into truth, its particular nature will have vanished, and its actual self be destroyed'. Or the passage about pleasure (p. 534): 'Pleasure may conceivably be so supplemented, and modified by addition, that it does *not remain precisely that which we call pleasure.* Its pleasantness certainly could not be lost but it might be blended *past recognition*, with other aspects of the Whole. The Absolute, then, perhaps, strictly does not feel pleasure.' To me it is unintelligible what sort of a thing a pleasantness is which is not felt or which is changed past recognition from what we call pleasure. Mr. Bradley seems to be overdrawing his account with human ignorance. There must be something wrong with a theory defensible only by such desperate expedients.

are valid only on the level of appearances. Any attempt to do so only drags the Absolute down into the region of appearance, from which it can only be rescued by desperate metaphors. The Absolute must stand in some relation to the appearances, and yet no concrete content can be given to this relation. Hence there is a continual tendency for it to break up and for its terms to fall apart. As soon as we press for a definite statement, the Absolute and its appearances seem utterly and irreconcilably to separate. It is only by accepting hazy phrases, or by assuming alternately opposite points of view, that we can shut our eyes to the fact that Mr. Bradley has not succeeded in establishing a real reconciliation. It is only by his imperious fiat that the world of Appearances hangs together with the world of Reality.

To criticise Mr. Bradley is dangerous work, for he is ever ready to turn on his critics with a charge of 'misunderstanding,' and we all know the polished, though not always polite, manner of his rebukes. However, since this is not a matter in which faith must eke out the failure of insight on the principle: if it is true, you gain, if it is false, you do not lose—I can only record and to the best of my power justify my inability to understand the compatibility of the two points of view on which Mr. Bradley's philosophy is built up, and which he regards as harmonious. I will once more briefly state my objections, and I will take for my text the passage: "All is appearance, and no appearance, or any combination of these, is the same as reality. This is half the truth and by itself a dangerous error. We must turn at once to correct it by adding its counterpart and supplement. The Absolute is its appearances, it really is all and every one of them. That is the other half-truth . . . and we know the sense and meaning in which these half-truths come together into one. The Absolute is each appearance, and is all, but is not any one as such. And it is not all equally, but one appearance is more real than another. In short the doctrine of degrees of reality and truth is the fundamental answer to our problem."[1] Here we have on the one hand appearances, none of which is, as such, real, and on the other hand the Absolute, which is complete reality, and yet is made up of no other material than just those appearances. And the miracle of a perfect Absolute, all the contents of which, taken by themselves, are imperfect, is to be made acceptable by the doctrine, that these

[1] *Appearance and Reality*, p. 487.

contents are neither wholly unreal nor wholly real, but differ according as they embody more or less of reality. Perhaps the most defensible way of putting it, would be: Given a self-consistent, all-inclusive, thoroughly harmonious Reality, then every limited abstract aspect of it (or point of view of regarding it) is an appearance. The more of the whole such an aspect embraces either in extent or in internal systematisation, the more real it is, and the point of view of the Absolute embraces the whole both in width and in depth in one single comprehensive aspect.[1] This, I take it, is the central idea of Mr. Bradley's philosophy—but, however intelligible it is in the abstract, it involves us at once in difficulties in its application to concrete experience. For since even our highest experience is still appearance, the scale of degrees breaks off abruptly and does not directly connect with the Absolute. And this gap is fatal, for it destroys all organic connexion between the experience of the Absolute and our experience. The scale of degrees fails to bridge the gap, for it still remains on the side of the appearances and does not reach reality. The knowledge that some appearances are more real than others helps us in no way to understand, how all appearances, of whatever degree of reality, are raised to full reality in the Absolute. And so long as we are deprived of this insight, the appearances and the Absolute will always tend to form two separate worlds, of which we can say they are one, but which we cannot see to be one. The finite and the infinite points of view will always remain opposed. We must always feel, that from the point of view of the Absolute we cannot strictly say that it has either Thought, or Goodness, or Truth, or Error, or Time, or Space, for any such predication would imply at once a falling back into the one-sided, abstract points of view appropriate only to the world of appearances. Finite aspects exist only for finite beings with finite experience. They have no place, as finite, in the experience of the Absolute, but, as there transmuted, they have no meaning or value for finite beings. It is the old problem which Mr. Bradley set out to solve, which is again on our hands: the reconciliation of diversity with unity. If we call the differences 'appearances' or 'one-sided aspects' of one reality, then the problem faces us: Do these aspects exist for the Absolute or for a finite observer, who never grasps

[1] *Cf.* p. 525: 'the total universe, present imperfectly in the finite experience, would, if completed, be merely the completion of this experience'.

the whole? If for the Absolute, then we know that at any rate they cannot exist *as aspects*, but are merged in the rich content of a supra-relational experience. And this is a solution which we cannot understand. If for us as finite beings, then we must remember that being finite we are ourselves but appearances and elements *in* the Absolute (else it would not be all-inclusive), and then the existence of finite points of view becomes from the point of view of the Absolute simply inexplicable. And thus we have no solution at all.

No one, I think, however much he may disagree with Mr. Bradley and however unable he may be to accept his conclusions, can lay down *Appearance and Reality* without a sincere feeling of admiration for the combined energy and subtlety of his thought. But with his admiration there will, perhaps, mingle a feeling of regret, that instead of beginning with an assumption about Reality and testing our knowledge in the light of it, Mr. Bradley did not begin at the other end and study the process of knowledge itself, so as to discover, how and under what conditions and for what reasons we come to regard this or that view of the world as 'real' and 'true'. No doubt the predication of these terms implies an ideal, a standard, which is our guidance and our justification. But a clear conception of this standard is only gained by reflexion on many past applications of it in a form far more fragmentary and obscure. And even so we may not at once arrive at a final conception. And, if there is still room for improvement, we can only effect it, by renewed application of the standard and renewed reflexion on the results of such application. Just as our moral ideal becomes clearer to us in the very process of its realisation in moral practice, so it may be that the meaning of reality and truth reveals itself to us more fully in the very growth and accumulation of experience. At any rate, a conception of reality thus arrived at is likely to bear a closer and more *positive* relation to all those sides of our experience which Mr. Bradley condemns as appearances. It would certainly have saved him from his extreme Intellectualism, and it might have made him appreciate more highly the part played by our 'other' functions, besides the intellect, in the making of our knowledge of Reality.

It will be the object of the second half of this paper to consider the attempt which Pragmatism has made to approach the problem from this side.

(To be continued.)

II.—THE NATURALISM OF HUME (II.).

By Norman Smith.

In the previous article I have considered Hume's theory of knowledge and may now proceed to his treatment of morals. My chief aim will be to show how Hume finds in the facts of the moral life convincing confirmation of his naturalistic view of reason, and so is enabled to develop an ethical theory in complete harmony with his general philosophy. Up to a certain point Green states very fairly the connexion between Hume's view of reason in his theory of knowledge and his account of its function in his ethics. "Reason, constituting no objects, affords no motives. 'It is only the slave of the passions, and can never pretend to any other office than to serve and obey them.' . . . It is the clearness with which Hume points out that, as it cannot move, so neither can it restrain action, that in this regard chiefly distinguishes him from Locke. The check to any passion, he points out, can only proceed from some counter-motive, and such a motive reason, 'having no original influence,' cannot give."[1] But since Green has ignored Hume's doctrine of natural belief, and therefore has interpreted him as a thorough-going associationist, he very naturally treats as an inconsistency Hume's theory of the disinterested passions. Hume, he asserts, is constrained by his principles to explain all action as due to pleasure and pain. "Hume's system has the merit of relative consistency. He sees that the two sides of Locke's doctrine—one that thought originates nothing, but takes its objects as given in feeling, the other that the good which is the object of desire is pleasant feeling—are inseparable. Hence he decisively rejects every notion of rational or unselfish affections, which would imply that they are other than desires for pleasure. . . . But here his consistency stops. The principle which forbade him to admit any object of desire but pleasure is practically forgotten in his account of the sources of pleasure, and its being so forgotten is the condition

[1] Introduction to the moral part of the *Treatise*, p. 48.

of the desire for pleasure being made plausibly to serve as a foundation for morals."[1] Now so far as I understand Hume's philosophy, it contains no fundamental principle which forbids him to recognise disinterested passions. The mind through natural belief transcends itself in knowledge, and it may similarly through love, sympathy, and benevolence, forget private interests in unselfish affection. If it can be shown that Hume nowhere asserts the object of all action to be pleasure and pain, and that, on the contrary, he constantly maintains that there are many disinterested propensities in our complex human nature, we may conclude that there is no such inconsistency in his ethical philosophy nor any lack of agreement between it and his theory of knowledge.

This part of my task is rendered easy by Prof. McGilvary's very convincing article on "Altruism in Hume's *Treatise*" in the *Philosophical Review*;[2] and I shall make full use of his conclusions, referring the reader to his thorough and detailed examination of the relevant passages. Two points would seem to be established by Prof. McGilvary: first, that Hume recognises passions which are not founded on pleasure and pain; and, secondly, that even in those passions which are founded on pleasure and pain the object of the desire is not pleasure.[3] As to the first, though pleasure and pain are 'the chief spring or actuating principle of the human mind,' passions "frequently arise from a natural impulse or instinct which is perfectly unaccountable. Of this kind is the desire of punishment to our enemies, and of happiness to our friends; hunger, lust, and a few other bodily appetites. These passions, properly speaking, produce good and evil, and proceed not from them, like the other affections."[4] These same passions may be artificially roused by ideas of

[1] Introduction to the moral part of the *Treatise*, pp. 31-32.

[2] May, 1903, vol. xii., No. 3.

[3] As Prof. McGilvary points out, Lechartier, Jodl, Pfleiderer and Albee all more or less agree with Green in their interpretation of the *Treatise*. Jodl, Pfleiderer and Albee admit, however, that in the *Enquiry* Hume represents human nature as largely moved by unselfish considerations. Gizycki seems to be the only commentator, previous to Prof. McGilvary, who regards Hume as maintaining the disinterestedness of sympathy and benevolence in the *Treatise* as well as in the *Enquiry*. Prof. McGilvary does not attempt to show the bearing of Hume's ethics on his theory of knowledge; and it is with that alone that I am here directly concerned. It is undoubtedly the usual purely associationist interpretation of Hume's theory of knowledge that has led commentators to expect from him an egoistic theory of morals.

[4] *Treatise*, ii., iii., ix.; G., p. 215; S-B., p. 439. By the phrase 'produce good and evil' Hume means, it must be noted, 'produce *pleasure* and *pain*'.

pleasure and pain, but unless they were primarily instinctive, the pleasure and pain would have no existence at all. Hume gives as a list of the instinctive passions—in addition, of course, to such bodily desires as hunger and lust—"benevolence and resentment, the love of life, and kindness to children".[1] Apparently, therefore, by 'the desire of happiness to our friends' Hume means private benevolence, or as he names it in the *Enquiry* 'humanity and friendship,' and by 'the desire of punishment to our enemies' resentment or love of vengeance. In the *Enquiry* Hume adds to the above list, love of fame or power. "Nature must, by the internal frame and constitution of the mind, give an original propensity to fame, ere we can reap any pleasure from that acquisition, or pursue it from motives of self-love, and desire of happiness."[2] Hume nowhere states his position in a more forcible manner than in the following passage: "Who sees not that vengeance, from the force alone of passion, may be so eagerly pursued, as to make us knowingly neglect every consideration of ease, interest, or safety; and, like some vindictive animals, infuse our very souls into the wounds we give an enemy; and what a malignant philosophy must it be, that will not allow to humanity and friendship the same privileges which are indisputably granted to the darker passions of enmity and resentment".[3]

As regards the direct and indirect passions which are 'founded on pleasure and pain,' Green was obviously misled by this ambiguous phrase. It does not mean that these passions have pleasure and pain as their object but only as their efficient cause. "The mind by an *original* instinct tends to unite itself with the good, and to avoid the evil, tho' they be conceiv'd merely in idea, and be consider'd as to exist in any future period of time."[4] Hence any pleasant idea, however objective the content of that idea may be, at once inclines the mind to desire it. Feeling is thus the chief moving principle, but anything whatsoever to which it is attached by nature, the happiness of a fellow-creature as immediately as one's own good, may be the end of action.

[1] *Treatise*, ii., iii., iii.; G., pp. 196-197; S-B., p. 417. *Cf.* McGilvary, p. 277, note.

[2] *Enquiry*, Appendix ii.; G., p. 271; S-B., p. 301.

[3] *Ibid.*; G., p. 272; S-B., p. 302. I may quote Prof. McGilvary's remark on Hume's treatment of love of life: "Contrary to the usage of Hobbes, Hume does not include the self-preservative instinct in self-love. In this he showed fine psychological discernment. The instinct which prompts us to cling to life has no conscious end in view, any more than hunger has" (p. 277, note).

[4] *Treatise*, ii., iii., ix.; G., pp. 214-215; S-B., p. 438.

Hume does not, of course, deny that pleasure and pain may themselves be the ends sought, but even in such cases we can distinguish between the pleasure sought as end and the pleasantness of the idea of that pleasure which is the efficient cause.[1]

Now nature both through the instinctive and through the indirect passions has connected feeling with very definite objective ends. And though a double process of association is required to bring the indirect passions into play—and upon this associationist mechanism Hume dwells at great length in the *Treatise*—the associations do not explain the disinterestedness of their action, but from the start presuppose it. As the detail of Hume's associationist explanation of the mechanism of the passions does not specially concern us, I may simply quote the following passage in which Prof. McGilvary sums up the results of his examination of it. "There is nothing said of past experience, nothing about the previously ascertained conduciveness of the loved object to my pleasure, for the sake of the re-enjoyment of which I am now doing anything. Association does not begin with self-love and change it into a love for another, neither does it introduce the very least element of self-love into the nature of my love for another. On the contrary, it is the *original* qualities of love which make it possible for the double association to work. And one of these original qualities is the fact that love is 'always directed to some sensible being external to us,' that is, the original and invariable altruism of love is *presupposed* by Hume's associational explanation; the associations do not produce the altruism. . . . To put it succinctly, we love others because for some reason they please us; but we do not love them in order to get pleasure either from them or from our love for them."[2] Thus nature, by establishing a connexion between our feelings and certain objective ends, determines us to actions that completely transcend self-love. The distinction between the direct and the indirect passions is not fundamental, and we may apply to both what Hume says of the instinctive passions, that, properly speaking, they "produce good and evil, and proceed not from them".[3] Indeed no philosophical writer has ever stated more forcibly than Hume the important ethical principle that pleasure is conditioned by desire and not *vice versa*. "Whatever contradiction may vulgarly be supposed between the *selfish* and *social*

[1] *Cf.* McGilvary, p. 281. [2] *Ibid.*, pp. 290-291.
[3] *Treatise*, ii., iii., ix.; G., p. 215; S-B., p. 439.

sentiments or dispositions, they are really no more opposite than selfish and ambitious, selfish and revengeful, selfish and vain. It is requisite that there be an original propensity of some kind, in order to be a basis to self-love, by giving a relish to the objects of its pursuit; and none more fit for this purpose than benevolence or humanity. The goods of fortune are spent in one gratification or another: the miser who accumulates his annual income, and lends it out at interest, has really spent it in the gratification of his avarice. And it would be difficult to show why a man is more a loser by a generous action, than by any other method of expense; since *the utmost which he can attain by the most elaborate self-ishness, is the indulgence of some affection.*"[1] "So far from thinking, that men have no affection for any thing beyond themselves, I am of opinion, that tho' it be rare to meet with one, who loves any single person better than himself; yet 'tis as rare to meet with one in whom all the kind affections, taken together, do not over-balance all the selfish."[2]

But to return to our central point—the dependence of reason on feeling and instinct—Hume derives from the facts of moral experience the most convincing proof of the truth of his naturalistic point of view. There is complete analogy between the dependence of reason on natural belief and its relation to the natural passions. The passions determine our moral sense and the standard of conduct, just as the natural beliefs constitute the only possible ground of empirical inference.

It has already been shown that reason does not produce the passions; and from this it follows that it is equally incapable of governing them. A passion can only be opposed by a counter-passion, and as no passion is produced by reason, none is controlled by it. "We speak not strictly and philosophically when we talk of the combat of passion and of reason. Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them."[3] This conclusion is so vital for my purpose that I may state Hume's argument at length. "A passion is an original existence, or, if you will, modification of existence, and contains not any representative quality, which renders it a copy of any other existence or

[1] *Enquiry*, ix., ii.; G., pp. 255-256; S-B., p. 281. Italics in last sentence are mine.

[2] *Treatise*, iii., ii., ii.; G., p. 260; S-B., p. 487.

[3] *Ibid.*, ii., iii., iii.; G., p. 195; S-B., p. 415. *Cf. Treatise*, iii., i., i.; G., pp. 235-236; S-B., pp. 457-458.

modification.[1] When I am angry, I am actually possest with the passion, and in that emotion have no more a reference to any other object, than when I am thirsty, or sick, or more than five foot high. 'Tis impossible, therefore, that this passion can be oppos'd by, or be contradictory to truth and reason; since this contradiction consists in the disagreement of ideas, consider'd as copies, with those objects, which they represent. . . . It must follow, that passions can be contrary to reason only so far as they are *accompany'd* with some judgment or opinion."[2] Now only in two senses can an affection, when accompanied by judgment, be called unreasonable: "First, When a passion, such as hope or fear . . . is founded on the supposition of the existence of objects, which really do not exist. Secondly, When in exerting any passion in action, we chuse means insufficient for the design'd end, and deceive ourselves in our judgment of causes and effects. When a passion is neither founded on false suppositions, nor chuses means insufficient for the end, the understanding can neither justify nor condemn it. 'Tis not contrary to reason to prefer the destruction of the whole world to the scratching of my finger. 'Tis not contrary to reason for me to chuse my total ruin, to prevent the least uneasiness of an *Indian* or person wholly unknown to me. 'Tis as little contrary to reason to prefer even my own acknowledg'd lesser good to my greater, and have a more ardent affection for the former than the latter."[3] Thus though a passion may be described as unreasonable when accompanied by a false judgment, even then it is not the passion that is unreasonable but the judgment. And on this account also, reason and passion can never oppose one another. For immediately we discover the falsity of the judgment, passion at once yields to reason. The actions, being recognised as based on false calculations, cease to be the required means for the satisfaction of our desire, and are no longer willed. The restraint which is exercised by the calm emotions, such as sympathy and benevolence, over the violent and transitory passions constitutes strength of will; but owing to the former being more known by their effects than by immediate feeling they have been mistaken for the determinations of reason.

In the section of the *Treatise* entitled, 'Moral Distinctions

[1] According to Hume all the passions, both direct and indirect, are ultimate and unanalysable. No passion can through association or any other means be developed out of, or transformed into, any other passion.

[2] *Treatise*, ii., iii., iii.; G., p. 195; S-B., pp. 415-416.

[3] *Loc. cit.; cf.* iii., i., i.; G., p. 236; S-B., p. 458.

not deriv'd from Reason,'[1] and also in Appendix I. of the *Enquiry*, Hume repeats and reinforces this argument against the attempt to rationalise morals. Reason is the discovery of truth or falsehood; and truth or falsehood "consists in an agreement or disagreement either to the *real* relations of ideas, or to *real* existence and matter of fact".[2] As we have just seen, however, each passion is a unique modification of mind, an original fact complete in itself, and therefore reveals no relations either between itself and other passions or between itself and reality, that can be pronounced either true or false, either contrary or conformable to reason. Each passion imperiously demands the satisfaction of its instinct, and carries no reference to any reality beyond. But though the yielding to passion is never in any single instance contrary to reason, we still judge such satisfaction to be either good or bad, meritorious or the reverse, and in accordance with these judgments control our propensities. Does not that imply the activity of reason?

In treating of this problem Hume states what he regards as being the fundamental distinction between the use of reason in knowledge and in morals. What greatly strengthens, and partly causes, belief in the rationalistic theory of morals is the fact that before deciding upon the merit of any particular action we have to consider all the separate relations, all the circumstances and situations of the persons concerned. Our procedure thus seems to be identical with the process by which we determine the proportion of lines in any triangle by examination of the relations of its parts. The analogy, however, is quite misleading. For whereas the mathematician from the known relations of the parts of the figure infers some unknown relation, in moral inquiries *all* the relations and circumstances must be submitted to us before we can pass sentence of blame or approbation. "While we are ignorant whether a man were aggressor or not, how can we determine whether the person who killed him be criminal or innocent? But after every circumstance, every relation is known, the understanding has no further room to operate, nor any object on which to employ itself."[3] When the whole set of circumstances is laid before the mind, we instinctively feel a new impression, such as exists nowhere outside the mind and therefore can never be discovered in the external circumstances of an action, in its consequences to ourselves or to others, namely, a new and original impres-

[1] *Treatise*, iii., i., i.; *cf. Enquiry Concerning Morals*, Appendix I.
[2] *Treatise*, iii., i., i.; G., p. 236; S-B., p. 458.
[3] *Enquiry Concerning Morals*, Appendix I.; G., p. 262; S-B., p. 290.

sion of affection or disgust, esteem or contempt, approbation or blame. "Here is a matter of fact; but 'tis the object of feeling, not of reason. It lies in yourself, not in the object. So that when you pronounce any action or character to be vicious, you mean nothing, but that from the constitution of your nature you have a feeling or sentiment of blame upon the contemplation of it."[1] "Thus the distinct boundaries and offices of *reason* and *taste* are easily ascertained. The former conveys the knowledge of truth and falsehood: the latter gives the sentiment of beauty and deformity, vice and virtue. The one discovers objects as they really stand in nature, without addition or diminution: the other has a productive faculty, and gilding or staining all natural objects with the colours, borrowed from internal sentiment, raises in a manner a new creation. . . . From circumstances and relations, known or supposed, the former leads us to the discovery of the concealed and unknown: after all circumstances and relations are laid before us, the latter makes us feel from the whole a new sentiment of blame or approbation."[2] In the sentences which follow the above quotation, Hume speaks of reason as an ultimate faculty which attains to truth and reality. And in so far as reason is analytic, discovering necessary relations between ideas; it is undoubtedly

[1] *Treatise*, iii., i., i.; G., p. 245; S-B., p. 469. On the eve of the publication of this third volume of the *Treatise* (16th March, 1740), Hume wrote as follows to Francis Hutcheson: "I must consult you in a point of prudence. I have concluded a reasoning with the following sentences: 'When you pronounce any action or character to be vicious, you mean nothing but that, from the particular constitution of your nature, you have a feeling or sentiment of blame from the contemplation of it. Vice and virtue, therefore, may be compared to sounds, colours, heat, and cold, which, according to modern philosophy are not qualities in objects, but perceptions in the mind. And this discovery in morals, like that other in physics, is to be regarded as a mighty advancement of speculative sciences, though like that too it has little or no influence on practice.' Is not this a little too strong? I desire your opinion of it, though I cannot entirely promise to conform myself to it. I wish from my heart I could avoid concluding, that since morality, according to your opinion, as well as mine, is determined merely by sentiment, it regards only human nature and human life. . . . If morality were determined by reason, that is the same to all rational beings; but nothing but experience can assure us that the sentiments are the same. What experience have we with regard to superior beings? How can we ascribe to them any sentiments at all? They have implanted those sentiments in us for the conduct of life like our bodily sensations, which they possess not themselves." Burton in quoting this letter (*Life of Hume*, vol. i., pp. 117-120) points out that the above passage appears in the *Treatise* with no other variation than the substitution of the word 'considerable' for 'mighty'.

[2] *Enquiry Concerning Morals*, Appendix I.; G., p. 265; S-B., p. 294.

so. We have learned, however, in the *Treatise* that reason in its more important function as synthetic is exactly on a level with taste and equally incapable of supplying an absolute standard: the judgments to which both give rise are alike relative to "the particular fabric and constitution of the human species". Both also are creative faculties. For while the one produces the moral sentiments which condition all action, the other, as imagination, generates those synthetic principles which make human knowledge possible.

So far Hume's theory would seem to assign so minor a rôle to reason, as practically to eliminate it from the specifically moral sphere. For though it is required to pave the way for sentiment and give a proper discernment of its object, it would seem to play no part at all in determining any one of these objects or their relative value. When we pass, however, to Hume's treatment of the 'artificial' virtues and of the principle of utility upon which they rest, the other side of the truth comes into view, and is quite fairly emphasised. To the question why justice is approved, the only possible answer consists in a reference to its utility. Justice with all the machinery of law and government is necessary for the existence and advancement of society. Justice is indispensable, and therefore is approved. "Reflections on the beneficial consequences of this virtue are the *sole* foundation of its merit."[1] Utility "is the sole source of the moral approbation paid to fidelity, justice, veracity, integrity, and those other estimable and useful qualities and principles".[2] "The boundaries of justice still grow larger, in proportion to the largeness of men's views, and the force of their mutual connexions. History, experience, reason sufficiently instruct us in the natural progress of human sentiments, and in the gradual enlargement of our regards to justice, in proportion as we become acquainted with the extensive utility of that virtue."[3]

But why does justice receive *moral* approbation? If it is entirely based on utilitarian grounds, the approval must be due to reason, and that is contrary to Hume's fundamental thesis. To answer this question we must raise the further problem: Why does utility please? What is good for society as a whole does not necessarily in any particular case coincide with the good of the individual. That he should esteem justice is not therefore self-evident; and his approval really rests on the sympathetic instinct which

[1] *Enquiry Concerning Morals*, iii., i.; G., p. 179; S-B., p. 183.
[2] *Ibid.*, iii., ii.; G., p. 196; S-B., p. 204.
[3] *Ibid.*, iii., i.; G., p. 187; S-B., p. 192.

makes the good of society appeal to him. "The ultimate ends of human actions can never, in any case, be accounted for by *reason*, but recommend themselves entirely to the sentiments and affections of mankind, without any dependence on the intellectual faculties."[1] "Utility is only a tendency to a certain end; and were the end totally indifferent to us, we should feel the same indifference towards the means. It is requisite a *sentiment* should here display itself, in order to give a preference to the useful above the pernicious tendencies. . . . Here therefore *reason* instructs us in the several tendencies of actions, and *humanity* makes a distinction in favour of those which are useful and beneficial."[2] Or as Hume states the same position in the *Treatise:* "Self-interest is the original motive to the establishment of justice: but a sympathy with public interest is the source of the moral approbation, which attends that virtue".[3] Even the artificial virtues, therefore, rest on feeling and instinct, and save through them can acquire no moral sanction. Indeed only for convenience in distinguishing them from the more direct virtues can we name them artificial. They are influenced by the reflective activities of reason; but, as Hume remarks, "in so sagacious an animal [as man], what necessarily arises from the exertion of his intellectual faculties may justly be esteemed natural".[4]

Hume considers, and rejects, the purely instinctive explanation of justice. That justice does not arise directly, like hunger, love of life, or attachment to offspring, from a simple original instinct, is obvious if we consider how intricate and often conventional are the laws, such as those of property, through which justice is realised. There would be required for that purpose "ten thousand different instincts, and these employed about objects of the greatest intricacy and nicest discernment. For when a definition of *property* is required, that relation is found to resolve itself into any possession acquired by occupation, by industry, by prescription, by inheritance, by contract, etc. Can we think that nature, by an original instinct, instructs us in all these methods of acquisition?"[5] In any case, as Hume very justly adds,[6] we cannot believe that nature creates a rational

[1] *Enquiry Concerning Morals*, Appendix I.; G., p. 264; S-B., p. 293.
[2] *Ibid.*, G., p. 259; S-B., p. 286.
[3] *Treatise*, iii., ii., ii.; G., p. 271; S-B., pp. 499-500.
[4] *Enquiry Concerning Morals*, Appendix III.; G., p. 275; S-B., p. 307.
[5] *Ibid.*, iii., ii.; G., pp. 194-195; S-B., pp. 201-202. *Cf. Treatise*, iii., i., ii.; G., p. 249; S-B., p. 473.
[6] *Enquiry*, *loc. cit.*

creature and yet does not trust anything to the operation of his reason. Through the instinctive activities of reason nature adapts the other instincts of man to the complex requirements of social existence.

The remaining problem, how if virtue is just this feeling of approbation, and every passion carries with it the approval of its own particular end, the control of one passion by another, or the condemnation of any particular passion in its opposition to another, is to be accounted for, lies to a great extent beyond the province of this article, but may be briefly indicated. Hume regards the social passions upon which the artificial virtues rest as the specifically moral sentiments. "These principles, we must remark, are social and universal; they form, in a manner, the *party* of humankind against vice or disorder, its common enemy."[1] "Avarice, ambition, vanity, and all passions vulgarly, though improperly, comprised under the denomination of *self-love*, are here excluded from our theory concerning the origin of morals, not because they are too weak, but because they have not a proper direction for that purpose."[2] They produce different sentiments in different minds, and the same object will not satisfy more than one individual; whereas the social sentiments are identical in all men, and the same object rouses them in all human creatures. Language is moulded upon this obvious distinction, and invents a peculiar set of terms to express those judgments of censure and approbation which arise from the social sentiments and which are developed in the artificial virtues through considerations of general utility. "Virtue and Vice become then known; morals are recognised; certain general ideas are framed of human conduct and behaviour. . . . And by such universal principles are the particular sentiments of self-love frequently controlled and limited."[3] Hume might well have named the artificial virtues the rational virtues, and so without giving up the primacy of feeling, have more completely recognised the regulating power of reason. Each and every passion is in itself, taken generally, perfectly legitimate. Reason can neither justify nor condemn it. But since life, especially social life, demands organisation, we learn to govern our various passions in the light of those general utilitarian considerations which constitute the rules of personal prudence and of social justice. The controlling force in such cases is the universal social sentiments upon which the appeal to utility rests.[4] These sentiments are originally

[1] *Enquiry Concerning Morals*, ix., i.; G., p. 251; S-B., p. 275.
[2] *Ibid.*, G., p. 248; S-B., p. 271. [3] *Ibid.*, G., p. 250; S-B., p. 274.
[4] *Ibid.*, vi., i.; G., p. 222; S-B., p. 239.

weaker than the selfish passions, but are so strengthened both by private affections, such as the love of fame or reputation, and by various social influences, as finally to overpower them. Thus, as Hume explicitly states both in the *Treatise* and in the *Enquiry*, reason and sentiment concur in almost all moral action. "Both these causes are intermix'd in our judgments of morals ; after the same manner as they are in our decisions concerning most kinds of external beauty : Tho' I am also of opinion, that reflections on the tendencies of actions have by far the greatest influence, and determine all the great lines of our duty."[1] Feeling determines all our ends : reason decides when and how these can best be attained. Though reason is 'only the slave of the passions,' it is in this subordinate function as indispensable as feeling. Without displacing the instincts, it enables them to fulfil their human function.

Hume's theory of reason and instinct thus runs throughout his whole philosophy ; and the unity to which it enables us to reduce his system seems to me to justify the importance which I have ascribed to it. His sensationalist principle, that all the ultimate data of knowledge are detached impressions, is equally fundamental, but is consistent with the most divergent views of the constitution of our complex experience. Only when we have recognised the important functions which Hume ascribes to feeling and instinct, and the highly complex emotions and propensities which he is willing to regard as ultimate and unanalysable, are we in a position to do justice to his new, and very original, conception of the nature and conditions of experience. Hume may, indeed, be regarded, even more truly than Kant, as the father of all those subsequent philosophies that are based on an opposition between thought and feeling, truth and validity, actuality and worth. Though his real position is positivism or naturalism, it is not of that familiar type which seeks to limit knowledge to material phenomena, but rather is akin to the broader, more humanistic, philosophy which was developed by Comte in his later days, and which rests the hopes of the future on those sciences which more immediately concern our human nature. For Hume's disbelief in speculative physics and in metaphysics is more than counter-

[1] *Treatise*, iii., iii., i. ; G., p. 347 ; S-B., p. 590. *Cf. Enquiry Concerning Morals*, i. ; G., p. 172 ; S-B., pp. 172-173. Reason is here used in its broadest sense as including both its analytic and its synthetic form. But as the estimation of the consequences of an action involves reasoning about matters of fact according to the principle of causality, the latter is, even in moral inquiry, the more important.

balanced by a belief in the possibility of a philosophical science of human nature, and of the special sciences of ethics, æsthetics, politics and political economy. These, he believes, are sciences which have a sure foundation in human experience. "So great is the force of laws, and of particular forms of government, and so little dependence have they on the humours and tempers of men, that consequences almost as general and certain may sometimes be deduced from them, as any which the mathematical sciences afford us."[1] Undoubtedly it is the other, and purely negative, side of his philosophy that has exercised most influence in the past; but more and more attention is being bestowed upon his constructive views, and these are certainly capable of independent development. Even if we reject the dogmatic sensationalism which he shares in common with Kant, this positive side of his teaching may still retain its value. At the same time we must regard it as doubtful whether the attempts that are being made to divorce this teaching from the metaphysical scepticism which serves as its foundation, and to use it in developing an idealistic conception of the universe, are likely to be successful. The *Treatise on Human Nature* may perhaps be regarded as still remaining the best commentary on such theories.

[1] *Essays*, iii., "That Politics may be reduced to a Science"; G., p. 99. Compare also the essay "Of the Standard of Taste," and those on political economy.

III.—EMPIRICISM AND THE ABSOLUTE.

By F. C. S. Schiller.

Philosophy just now is in a very interesting condition. For Evolutionism, the great scientific movement of the nineteenth century, is at length investing the last well-nigh inaccessible strongholds of 'pure' metaphysics,[1] and systematically grappling with the ultimate abstractions which human thought has recognised and respected for ages, but has never succeeded in rendering really useful and intelligible. In saying this I am of course well aware that the application of Evolutionism to metaphysics is supposed to have been accomplished by the Synthetic Philosophy of Herbert Spencer. This popular belief, however, is easily shown to be a misapprehension. If we take as the essence of Evolutionism the doctrine that the world is in process, and as its chief corollaries its vindication of the reality of change and of the belief that real (and not merely apparent) novelties occur, it is easily seen (1) that the old metaphysic must ultimately reject these doctrines, and (2) that Spencer's final surrender to its prejudices involves a failure to work out a truly evolutionist philosophy.

As to the first point; it has always been assumed that ultimately Reality must be a closed system, a fixed quantity, immutable substance, or absolute whole. Whence it follows, of course, that in the last resort Reality must be *stationary*, that there can be neither increase nor decrease in Being, and that the changes, processes and novelties we suppose ourselves to experience and observe do not really mean alterations in the substance of the All. They must, in other words, be human illusions (or, more politely, "appearances"), which do not penetrate to, or affect, the eternally complete and immutable Reality. If, resenting this paradox of metaphysics, we plead that these "appearances" are inextricably intertwined with the whole reality of human life, we are

[1] Profanely entitled 'Jericho' by Mr. Bradley (Mind, xiii., p. 330).

battled by the retort that this only shows that we too are 'appearance'.

Such metaphysic plainly is not to be silenced by mere common sense: it must be fought with its own weapons. And so it is probably more profitable to point out that in strict consistency these metaphysicians should demand, not merely that change, etc., should be illusions, but also that such illusions should be impossible. As Prof. Stout has pointed out, you can call all 'reality' illusion, but in so doing you imply the reality of the illusion. If then change is truly irrational and unthinkable, it should not be able to maintain even an illusory existence in a rational universe; and the very existence of such an illusion is itself as irrational and unthinkable as the reality which was condemned as illusory. Abstract metaphysic, therefore, is unable to explain, and unwilling to accept, phenomenal change, process and novelty: if it desires to be consistent it must simply *deny* them and revert as nearly as possible to its earliest form, *viz.*, Eleaticism. To evoke a philosophic meaning from the every-day facts of change and novelty and from the scientific testimonies to vast cosmic processes, we need a different method, which will deign to consider whether we should not do as well, or better, by frankly accepting the apparent facts of ordinary life and science, and regarding rather our preference for the constant and immutable as an artificial device which is susceptible of derivation. In other words we need Humanism.

(2) Now Spencer, in his attempt at an evaluation of the idea of Evolution, unfortunately committed himself to a use of physical principles which belong to the static series of conceptions, and are designed to satisfy our craving for constancy. The indestructibility of matter and the conservation of energy ('persistence of force') are constitutionally incapable of yielding a justification for the belief in a real process, a real progress, and a real alteration in the meaning of the world. In consequence, the phenomena of life and consciousness, in which the reality of such evolution is most manifest (for psychically *every* experience is more or less 'new'), have to be reduced by Spencer to physical terms. And thus the whole evolutionary process becomes ultimately nugatory. Spencer has to admit that the differentiation-process which forms the cosmic *diastole* has for its counterpart a *systole* which restores all things to homogeneity, and that throughout both processes the axiom of the Persistence of Force remains uninfringed. In terms of ultimate reality, therefore, both processes mean *the same*, and at the end of the infinite toil and struggle of the cosmic agony, the universe is where it

was, neither richer nor poorer, neither better nor worse. Evolution therefore has turned out a merely subjective illusion, engendered by our incapacity to follow the giant swing of the cosmic pendulum.

But can we hesitate to declare this result to be humanly speaking most unsatisfactory, and indeed profoundly irrational? And is it not worth while at least to entertain proposals for the radical revision of the metaphysical prepossessions that have brought us to such a pass? Why after all should we insist on starting from the conception of an absolute Whole presumed to be unalterable? Why should we not set out rather from the facts of *our* 'finite' struggling life, and pluck up courage to scrutinise the construction of the scientific, or rather metaphysical, bogies that stand in the way of a thorough-going Evolutionism? So at least the humanist must argue. He takes for granted all those features of our experience which are undeniable on the common-sense level of life. He takes as the sole essential problem of philosophy the harmonising of a life, which is as yet inharmonious, but which he is willing to believe may be transmuted into harmony. And instead of contenting himself with a verbal 'proof' that all evil is 'appearance' which is 'transcended' *sub specie æternitatis*, and then submitting tamely to the cosmic nightmare *in sæcula sæculorum*, he accepts all the apparent features of life, its transitoriness, cruelty, ignorance, uncertainty, struggle; the reality of its chances and changes, of its gains and losses, of its pains and pleasures, of its values, ethical, logical and æsthetical, of its goods and evils, truths and errors, as alike *data* for thought to grapple with and to transform, and holds that only by achieving this does our thought vindicate its use, and our truth become truly true. Not that the humanist imagines that all these features will in the end turn out to be equally significant: he contends only that they cannot be proved delusions *a priori*, that the sole way of proving them unreal is by abolishing them, and that until they have been so abolished they must be reckoned with as facts.

In the rationalistic intellectualism,[1] on the other hand, in

[1] I avoid the term 'idealism' as being too equivocal to be useful. There are too many 'idealisms' in the market, many of them more essentially opposed to each other than to views classified as 'realism'. Plato *e.g.* has an indefeasible claim to the title of 'idealist,' but Mr. G. E. Moore, in reviving the Platonic hypostasisation of abstract qualities in an extreme form, prefers to call himself a 'realist'. Berkeley again is firmly established in the histories of philosophy as the typical idealist, but his sensationalism constitutes a most irritating challenge to the rationalists' claim to monopolise the name. In addition there are 'subjective' and 'personal' and 'empirical' 'idealists' galore.

which the method of abstract metaphysics culminates, all these initial facts of common life are contemptuously ignored. Nothing less than the absolute totality of existence is worthy of its notice or worth assuming. This totality it supposes itself to demonstrate by some version of the ontological proof, and aims at developing, by *a priori* reasoning, into a coherent and consistent, self-determined and unalterable system.

To the humanist, on the other hand, this whole procedure seems a tissue of fallacious and futile assumptions. Why should he assume that experience necessarily forms a whole before he has got it all together? that it forms a system before he has traced it out, that the system is perfect (in any but a verbal, intellectualist, sense) before he has tried it? And if he assumes these things because he would like them to be true, what does he make the totality of Reality but a conceptual postulate, perhaps of rationality, perhaps of a subtler irrationality, which can be tested only by its working, and can in no case be argued from *a priori?* What in general are the *a priori* truths but *claims*, what are axioms but postulates? As for the complete determination of the universe, is not both the fact and its value open to doubt? As for its immutability, is it not a direct defiance of our primary experience and a wanton stultification of the evolutionist method? And finally, is not the fundamental intellectualism of the old metaphysic a gross parody of our actual thought, which proceeds from a purposive intelligent activity, and was not, and is not, and never can be, separated from the practical needs of life?

The traditional intellectualism has been slow to take note of an attack which outraged its prejudices and outranged the old catchwords of its warfare with the sensationalist intellectualism of the British empiricists. But in the realm of reason academic position is not in the long run proof against argument, nor can 'heresy' be stamped out by administrative measures. It is therefore greatly to Prof. Taylor's credit that he should have been the first to perceive that the creed of the 'orthodox' Oxford Intellectualism rested on a dangerously narrow basis, and to attempt its re-statement in the lucid and agreeable form presented by his *Elements of Metaphysics*. Though he has not perhaps fully realised the magnitude and difficulty of the *volte face* which was needed, he has effected some very interesting modifications and availed himself liberally of the adage *fas est et ab hoste doceri*. It seems fitting, therefore, to call special attention to these features of Prof. Taylor's work and to discuss how far they bridge the gulf between the old philosophy and the new.

I.

(1) Perhaps the most striking of Prof. Taylor's innovations is his constant use of the language of purpose and teleology.[1] For, in words at least, this seems to concede the main principle for which Humanism has contended, *viz.*, the purposiveness of human thought and experience.

Unfortunately, however, for the fruitful application of this principle, Prof. Taylor hardly seems to conceive purpose in the natural way. He habitually regards it rather from the external standpoint of the contemplative *spectator* than from that of the purposing *agent*, and it will always be found that a philosophy which refuses to enter into the feelings of the agent must in the end pronounce the whole conception of agency an unmeaning mystery. Prof. Taylor, therefore, seems to fall into an insidious error when he says (p. 55) "all that I mean is that the processes of conscious life are as a matter of fact only *intelligible* with reference to the results in which they culminate . . . or again that they all involve the kind of continuity of interest which belong (*sic*) to attention".[2] Similarly in defining spirit (p. 99) "where you have a connected system of factors which can only *be understood*" (why not *understand themselves?*) "by reference to an explicit or implicit end which constitutes their unity, you have spirit".[3] On this it seems obvious to remark that unless 'you' *were* an actively purposing spirit, you could never regard any connexion of things as teleological. Still even so incomplete a recognition of the purposiveness of human thought and action may prove important, if it leads to further reflexion.

(2) His psychological studies seem to have somewhat emancipated Prof. Taylor from the fatal fiction of a disinterested intellect. He even dares to represent metaphysics as the product of an "*instinctive demand* of our intellect for coherency and consistency of thought".[3] In science this interest is definitely practical, and its original object "is practical success in interference with the course of events" (p. 226). Historically, therefore, science is an offshoot of the arts (p. 385), and to this day "the ultimate object of all physical science is the successful formulation of such practical rules for action" (p. 284).[4]

[1] *Cf.* especially pp. 55, 58, 66, 106, 162, 204.

[2] Italics mine. [3] P. 3; *cf.* also pp. 5 and 44. Italics mine.

[4] *Cf.*, however, pp. 121-122, where to aim at "practical success in action rather than at logical consistency in thinking" is called a *pre-scientific* attitude, and the aim of Science is reduced to that of 'metaphysics,' *viz.*, consistent systematisation.

Hence (3) Science, Prof. Taylor agrees, makes use of Postulates, which serve its practical purposes without being ultimately true. Thus the principle of causality "must be pronounced to be neither an axiom nor an empirical truth, but a postulate, in the strict sense of the word, *i.e.*, an assumption which cannot be logically justified, but is made because of its practical value, and depends for confirmation on the success with which it can be applied. In the sense that it is a postulate which experience may confirm but cannot prove, it may properly be said to be *a priori*, but it is manifestly not *a priori* in the more familiar Kantian sense of the word" (p. 167).[1]

Similarly (pp. 175-176) the analysis of events into independent series, and their mathematical calculability, are postulates. It is too "a practical methodological postulate that the reign of law in physical nature is absolute" (p. 223), and a possible failure of experience to confirm it is disregarded because of our *interest* to discover such uniformities. "We treat all sequences as capable, by proper methods, of reduction to uniformity, for the same reason that we treat all offenders as possibly reclaimable. We desire that they should be so, and we therefore behave as if we knew that they were so" (p. 230). "Space and Time are phenomenal, the result of a process of construction forced on us by our practical needs" (p. 230).[2]

[1] *Cf.* also pp. 227-229. It is difficult to estimate how far this doctrine is modified in Prof. Taylor's interesting "Side Lights on Pragmatism" (in the *McGill University Magazine*, iii., 2), which, in spite of some inaccuracies in quotation (pp. 45, 60), and a good deal of (probably unintentional) misapprehension, seems to me to contain decidedly the most intelligent criticism which has so far proceeded from the absolutist camp. For though Prof. Taylor again instances (p. 61) among the "beliefs which are useful but cannot be proved independently to be true," "our scientific beliefs in causation or in the existence of laws of nature," and tells us that "for the purpose of formulating practical rules for the manipulation of bodies it is advantageous to be assured that . . . whatever happens . . . *will* happen again without variation," he is by no means clear about the logical position of this postulate. Immediately after he goes on to say that because such assumptions are merely considered true because they are convenient, "we have no right to say that they are true except within the limits in which they *have been* verified by actual experience". This would again invalidate them as methods of *prediction*, and exactly parallels Mill's famous stultification of the causal principle when he admitted that it might not hold in distant parts of the stellar regions. Prof. Taylor exhibits this contradiction in a more compact form, but with as profound an unconsciousness of its logical import.

[2] I cannot see why after this Prof. Taylor should insist on treating the Conservation of Mass and Energy as only empirical generalisations (p. 177).

It will be clear from the above that Prof. Taylor has no mean grasp of the epistemological convenience of postulates, and though their relations to the axioms are far from clear, it seems indisputable that he has surrendered some of the most characteristic features of the Kantian and post-Kantian apriorism.[1]

(4) Occasionally Prof. Taylor catches still deeper glimpses of the function of thought in the service of humanity. Rightly denying the possibility of an *a priori* theory of knowledge, he remarks (p. 17) that "the *instrument* can only be studied in its work, and we have to judge of its possibilities by the nature of its products".[2] Similarly (p. 152) "it seems indeed as if the function of the intellect were always that of a necessary and valuable *intermediary* between a lower and a higher level of immediate apprehension".[2]

After two such *aperçus* a relapse into intellectualism would hardly seem logically possible, the more so as Prof. Taylor also recognises the teleological character of the construction of identity, and regards it as a methodological assumption that "there are situations in the physical order which may be treated, with sufficient accuracy for our practical purposes, as recurring identically[3] (p. 284).

And so finally (5) Prof. Taylor is sometimes beguiled into what looks suspiciously like the most radical empiricism. He says (p. 23) that "the real is experience, and nothing but experience [!], and experience consists of psychical matter of fact. Proof of this proposition can *only*[4] be given in the same way as of *any other*[4] ultimate truth, *by making trial of it.*"[4] Again (p. 38) "the true character of any scientific method can *of course only*[4] be discovered by *the actual use* of it".[5]

[1] Kant personally he is only too eager to throw overboard, accusing his epistemological position of confusion (pp. 40, 134, 242).

[2] *Cf.* p. 32; italics mine. [3] *Cf.* also pp. 335 and 98. [4] Italics mine.

[5] *Cf.* p. 319 *s.f.* and p. 351 note. Less marked but still significant changes of attitude towards 'heresies' may be detected in the pains Prof. Taylor takes to refute 'Pluralism'. The upshot is indeed still the same, *viz.*, that pluralism can be shown to be irrational *a priori*, by abstract arguments which amount to little but logomachies about the 'independence' which pluralism is said to claim for the constituents of the cosmos. It seems improbable, however, that if Prof. Taylor would more accurately note the actual contentions of the pluralists he will continue to imagine that they can be refuted by the proof that 'individuals' are unities in pluralities. To give any real weight to the argument from the meaning of 'independence,' it would moreover have to be shown (1) that in ordinary or in pluralist parlance it implies the impossibility of co-existence; (2) that *change* is impossible, and (3) that 'independence' cannot be lost or abandoned. Of course if this useful word *means* that an immutable order of the universe has ordained that it

Readers of recent philosophic literature will easily trace to their sources all these doctrines of Prof. Taylor's, and may even recognise the *provenance* of many of his phrases. And though the word Pragmatism occurs only once, in a footnote, apparently by an oversight, the significance of his work consists in its bold and adroit attempt to graft the new Humanism on the old metaphysic. And seeing that a philosophy, once it has become indurated to the extent of conceiving itself as 'orthodoxy' usually takes about fifty years to see a new point,[1] Prof. Taylor's alacrity in appropriating so many of the distinctive features of Humanism would seem to be highly creditable.

It remains, however, to be investigated whether these doctrines are really as transferable as Prof. Taylor thinks. Can they take root in the more arid soil of an alien metaphysic, and will they, thus transplanted, continue to yield the same fruits and the same sort of intellectual nutriment? If Prof. Taylor has succeeded in doing this, his bold appeal to Cæsar to grant him what he failed to get out of the Absolute will have to be condoned.

II.

A close consideration of Prof. Taylor's whole work leads me to the conclusion that, in spite of its ingenuity, his attempt to convey nutritious novelties from an alien system into his own has only inflicted damage on both. The reasons for this conclusion may be set out as follows :—

(1) He seems to have adopted either too much or too little of the new ideas: enough to ruffle the composure and to

shall be impossible for anything once 'independent' ever to acquire more sociable habits of co-operation, all 'independent' things will be doomed to remain apart for ever. But surely pluralism means by 'independence' something shown *in the behaviour* of things towards each other, and not something that would render all intercourse impossible. And has not Prof. Taylor himself forgotten this tremendous metaphysical import of the word, when he casually mentions a process of becoming *independent* (p. 283)?

And finally Prof. Taylor has done well to grasp that the identity of God and the Absolute must not be *assumed* (pp. 347, 399), though he still thinks that it can be *achieved*, and labours to show that a finite God would be a very inferior object of worship. As, however, he is candid enough to avow (p. 399) that "the thought of ourselves as 'fellow-workers with God' would hardly lead to practical good works unless we also inconsistently allowed ourselves to imagine God as struggling against a hostile power and standing in need of our assistance," in short as *finite*, his former contention is hardly convincing.

[1] If we reckon from the date of Mr. Peirce's first paper (1878) twenty-seven of these have, happily, elapsed.

strain the cohesion of the old system, not enough to enable them to appear intelligible or coherent in the truncated and distorted forms with which they have to be forced. (2) The old Absolutism cannot really assimilate the new Pragmatism, which acts as a violent irritant and threatens Prof. Taylor's whole system with dissolution. And (3) Prof. Taylor's lucidity unfortunately brings out this fundamental incompatibility in strong relief: he should have remembered there are views which flourish best, like fungi, in obscurity, and which it is fatal to expose to the light. He has probably, therefore, done Absolutism doubtful service, and merely made clear its constitutional inability to meet the demands either of the human intellect or of the human heart.

In proof of which let us select for consideration (*A*) Prof. Taylor's account of the relations of 'appearance' and 'reality,' (*B*) his *criteria* of ultimate reality, (*C*) his conception of axioms and postulates, (*D*) his intellectualism, and (*E*) his derivation of the Absolute, with the doctrine of 'degrees of reality' and the 'ontological proof'.

(*A*) The antithesis of 'appearance' and 'reality' is the bed-rock of Prof. Taylor's as of Mr. Bradley's philosophy. But its assumption seems inadequately justified by the simple remark that we must rid experience of its contradictions (p. 2). Getting rid of contradictions is no doubt *one* aspect of our efforts to harmonise our experience, but it is by no means the easiest or most logical starting-point. For before we can get rid of a contradiction we have to make sure that we *have* a *real* contradiction to get rid of. Before making contradiction our criterion, therefore, we must find a criterion to discriminate between real and apparent contradictions.[1] Nor again is success in removing contradictions quite the alpha and omega of philosophy as intellectualists are fond of assuming. If it were, philosophy would be in a bad way. A severe construction of the principle would work sad havoc with most philosophic systems, and Prof. Taylor also would have been more judicious not to plume himself upon a consistency too great for mortal logic. For to a harsher stickler for literal consistency than myself, many of Prof. Taylor's statements would seem to need a good deal of reconciling.

What does appear to me to be somewhat deplorable is the way in which he misconceives the logical implications of his

[1] The levity with which this difficulty has been ignored is admirably brought out, in the April number, by Capt. Knox's masterly paper on "Mr. Bradley's 'Absolute Criterion,'" and I am not without hope that henceforth appeals to it will be more cautious.

doctrine. He fails to make it clear that (1) Nothing whatsoever can be condemned as 'appearance,' unless the superior reality which corrects it, is *already known*, and (2) that even then, whenever the superior reality is not a matter of immediate experience, its validity has to be established by the control it gives us over the 'appearance'.[1] It is fallacious, therefore, to claim ultimate reality for anything that is not (1) known or knowable, and (2) *useful* in operating on our apparent realities. Now as the Absolute has never yet been shown to be capable of satisfying either of these tests, this would conduct us to the distressing dilemma that we must either renounce the Absolute or the favourite antithesis between appearance and reality.

(*B*) Incidentally it has already been mentioned that Prof. Taylor liberally allows himself *two* criteria of metaphysical reality. This seems to exceed the legitimate luxury of speculation, and may perhaps seem as gross a self-indulgence to the strict metaphysician as bigamy does to the moralist. There is, however, no doubt of the fact. The first of Prof. Taylor's criteria is empirical, and its formulations have been quoted under I. (5), p. 354. Its ultimateness cannot be doubted, either as stated or intrinsically. For any principle can be conceived as a postulate, the value of which is established by trial. It must be supposed therefore that Prof. Taylor, when he states it, really means what he says, and is not merely lax in his language. But Prof. Taylor retains also an intellectualistic criterion which announces itself as ultimate, and is put forward independently and indeed with more formal pomp. It is Mr. Bradley's familiar maxim that Reality is not self-contradictory. This Prof. Taylor argues (p. 22) must be a metaphysical as well as a logical principle. For to think truly about things is to think in accord with their real nature. But to think them as contradictory is not to think them *truly*.

In its essence this would seem to be a form of the 'ontological' argument whereby a claim of our thought is turned into a revelation about reality. But in addition there is surely involved a twofold fallacy, *viz.* (1) an equivocation in the word 'truth,' which is used both of the internal self-consistency of thought *and* of its 'correspondence with reality,' and (2) the unworkable view of truth as the correspondence of thought with reality.[2]

And so it must surely be suggested that the principle of

[1] For both these points see my essay on "Preserving Appearances," *Humanism*, pp. 191, 195.

[2] For the first point see *Humanism*, p. 98; for the second, pp. 45-46.

Non-contradiction is a postulate, if ever there was one. At one time (p. 19) Prof. Taylor seems to perceive this, and speaks of the *audacity*[1] of making "a general statement about the whole universe of being" as resulting from our "*refusing*[1] to accept both sides of a contradiction as true". But on the next page his faith in the infallibility of postulation has become so robust that he proceeds to treat it as *knowledge* about reality, and as justifying a "confident" assertion that "it is positively certain that Reality or the universe is a self-consistent systematic whole"! A mere pragmatist would gasp at the audacity of such expeditious modes of overleaping all distinctions between wish and fact, assertion and proof, postulate and axiom; but when Prof. Taylor is in the mood such obstacles seem trivial.

(*C*) It seems doubtful whether he has quite arrived at the perfect clearness which is so desirable with regard to the relations of axioms and postulates. His procedure, however, is instructive. Without formal discussion he assumes (1) that axioms belong to the fundamental structure of our intellect (pp. 19, 378); (2) that postulates are methodological assumptions, defensible on the ground of their practical usefulness, but only so far as they actually succeed (pp. 227, 167, 169), and sometimes to be spoken of contemptuously as "mere practical postulates" (p. 239); (3) that questions of 'origin' (*i.e.* past history) have no bearing on the 'validity' of our conceptions. Origins, indeed, he concedes whole-heartedly to the pragmatists (p. 385): historically the true is the useful, science an offshoot of the arts (and why not all axioms once postulates?). But this does not matter, once the intellectual ideal has been developed. It can judge, and condemn, the very process which constituted the tribunal. Hence (4) it is more likely than not that postulates do not yield us final truth, as is indeed the case with the postulates of which Prof. Taylor makes most explicit mention. Hence (5) it appears that not only do logical defects not impair the usefulness of a conception (p. 168), but (p. 182) "any form of the causal postulate of which we can make effective use necessitates the recognition of that very Plurality of Causes, which we have seen to be logically excluded by the conception of cause with which science works" (or rather *doesn't!*), and "any form of the principle in which it is true is useless, and any form in which it is useful is untrue". This sweeping affirmation of the validity of useless truth and methodological fiction may be commended to the

[1] Italics mine.

timid souls who shrink from the more moderate inferences from the facts of postulation, which are drawn by the pragmatists, *viz.*, that *the true is useful* and that *the useless is untrue*.[1] To others it will seem queer that a doctrine of the thorough rationality of the universe should reach the result that the highest truths (*e.g.* the metaphysics of the Absolute) should be useless, while the useful, *viz.*, the postulates, are mostly untrue! It should be noted (6) as a final perplexity that on the same page (29) the psychical nature of Reality is called *both* an initial postulate *and* a fundamental metaphysical principle.

These then are Prof. Taylor's dicta on the subject of axioms and postulates, and certainly they seem variegated beyond necessity. A living and rapidly growing philosophy will no doubt always find it hard to sustain the appearance of a rigid verbal consistency, and I do not in the least hold with the cynics that demanding consistency from a metaphysician is as absurd as demanding demonstration from a logician—because in neither case will you get it! A certain amount of inconsistency is human and pardonable. But I somewhat doubt whether Prof. Taylor has not occasionally exceeded these limits. The decision, however, may be left to greater experts in metaphysical consistency who may even show that Prof. Taylor's assertions can be moulded into a consistent system. I am more interested to observe (1) that it seems a great exaggeration of the pragmatist doctrine of methodological assumptions to infer that because they are useful they are probably untrue. For *usefulness is no presumption of untruth*, but rather the reverse. It is not *qua* useful that our assumptions are judged untrue, but *qua* useless. To assume a principle, therefore, for methodological reasons, *i.e.*, as conducive to some proximate purpose, in nowise *prejudices* its claim to ulterior truth. It is 'true' as far as it goes, and whether it goes all the way is still an open question. The more useful, therefore, it turns out to be, the truer we judge it: whatever limitations it develops render it useless for our ulterior purposes, and become *pro tanto* motives for judging it untrue, and for trying to recast into a more widely applicable form. It is therefore for pragmatism the reverse of true that logical defects do not matter: only it contends that in abstraction from its use a conception has no actual meaning, and that it is the limitations which its use reveals which persuade us of its logical defectiveness rather than *vice versa*.

[1] *Cf. Humanism*, p. 38.

(2) Prof. Taylor hardly seems to dispose of the strong appeal which Pragmatism makes to the history of our axioms by merely trotting out the musty old antithesis of origin and validity. For in the first place to say that 'origin' does not decide 'validity' gives no positive information as to the connexion of the two, and, secondly, overlooks the fact that the appeal is not really to *origin* so much as to *past history*.[1]

Concerning the origin indeed of anything whatsoever not more than *two* fundamentally distinct views can be entertained. We may either (1) welcome its novelty and originality, and ascribe its appearance to a providential interposition (*θεῖα μοῖρα*), hailing it as a gift of the gods, *or* we may reluctantly recognise it as an 'accidental variation'. Metaphysically these explanations are equivalents. Or (2) we may sacrifice the recognition of novelty to the vindication of systematic connexion, and labour to show that, much as the apparent novelty has perturbed us, nothing has occurred that was not fully contained in, and determined by, its antecedents, so that the identical content of Reality has suffered no alteration by the occurrence. It is easy to predict that Intellectualism is sure to prefer the second of these views, and to regard the first as the very acme of irrationality. But when it argues thus, it only shows, perhaps, how far it is from understanding wherein irrationality consists for its opponents. For to a pragmatist there is nothing essentially irrational in the first account, because he has *not* assumed that the value of a thing depends on, and is eternally determined by, its origin. If the value of everything depends on its *efficiency* in use, it is clear that the rationality of the universe will consist not in its *a priori* inclusion in a metaphysical Absolute, but just in the actual way in which things manage to fit and work together. Things, therefore, neither acquire nor lose any real rationality by their mode of origin. Axioms may arise as postulates, thoughts as wishes, values as 'accidents'—their real validation comes from subsequent experience. Not that our *Humanism* can be indifferent to the pragmatic equivalents 'chance *or* purposing intelligence'. Only it sees that this further question also can only be decided *ex post facto*, when the novelties that burst into the dull routine of a mechanically calculable world have run their course, and we can judge them by their fruits whether indeed they were of God. Thus Pragmatism can rebut the charge of irrationality, and indeed retort it, by pointing out that desirable as it is for all our scientific purposes to regard

[1] *Cf. Personal Idealism*, pp. 123-125.

the world as wholly calculable, our anxiety may yet involve us ultimately in absurdity, if it leads us totally to deny the occurrence of real novelty. What should, therefore, be pointed out to Prof. Taylor is that Pragmatism, in appealing to the past history of conceptions for light upon their value, is *not* laying stress on their *origin*. It is assuming merely that the nature of a thing is revealed *empirically in its behaviour*, and that therefore to understand it, we should do well to make the most extensive study of that behaviour. If, moreover, it should be in process, it will be from a study of its history that we shall see the drift of that process, and if that process should admit of, or demand, teleological interpretation, we shall thus be enabled to forecast its end, and to anticipate its future, sufficiently for our purposes, even though the whole nature of a thing could only be fully expressed in its whole history. The attempt, on the other hand, to determine the 'validity' of a thing apart from its history and prospects would seem sheer folly. For it tries to contemplate in abstraction a mere cross-section of Reality and claims final validity for what may only be a misleading present phase of its total evolution.

Of course, however, the comparative merits of these two procedures might be completely altered if it were possible to pronounce upon the nature of a thing *a priori*. For in that case there would be no need to wait upon experience, and science and history would have no bearing upon ultimate Reality. This no doubt would be convenient, and forms perhaps the hidden motive for the anxiety of metaphysicians to attain some sort of *a priori* at any cost.

(3) Just as Prof. Taylor failed to see the full logical force of the pragmatist treatment of axioms, so, too, I fear, he has not quite apprehended the place which the new views assign to intellection. For he appears to think that pragmatist appeals to practical results can be sufficiently met by saying that the intellect is not wholly practical (pp. 121-122). It aspires beyond practical success in action to logical consistency in thinking, and so the ideals of truth and moral goodness fall asunder, and metaphysics 'plays its game' according to its own rules, and demands that ultimate truth shall satisfy the intellect, and that alone (pp. 384-386).

Unfortunately, however, these propositions do not meet the pragmatist contentions, and, in so far as relevant, are disputable. Not only does Prof. Taylor appear to confuse the proposition that every (valid) thought aims at a practical end with the assertion that it aims at moral goodness (p. 385), but he has not realised that the position he has

to refute is that *the intellect itself is practical throughout.* If this be true, the truths of metaphysics will be just as practical as the rules of conduct and the methods of science, and it is vain to pit 'logic' against 'practice'. For the reference to the use which verifies them can no more be eliminated from the logical than from the ethical valuations.[1]

(*D*) As a natural result of his failure to perceive the full scope of Pragmatism, Prof. Taylor can never really overcome the intellectualism of his school. He does not indeed carry it to the extreme of denying the rationality of the existence of anything but thought, and follows Mr. Bradley in recognising the existence of 'Feeling,' though he too leaves its relation to intellect in obscurity. But the aim of philosophy is still for him to *understand*, and *not* to *transform* experience, and the inherent connexion between the two has not yet dawned upon him. He too, that is, has not yet asked himself by what tests other than the pragmatic we can or do pronounce upon the claim of a proposition to validity. The intellectualist prejudice which he has consequently been able to retain oozes out spontaneously in all sorts of places. Thus (1) the *purposive* operations of our intelligent manipulation of experience are continually striking him as '*arbitrary*' (*e.g.* pp. 35, 145, 175, 178, 256). He regards (2) an 'indefinite regress' as a mark of unreality or 'appearance,' without discriminating between the cases where it means *the defeat of a purpose*, and those in which it means a successful accomplishment of the same, and indicates that an intellectual operation (*e.g.* 'counting' or assigning what for our purpose is the 'cause' of an event) can be performed as often as we *please* and *need*. Again (3), to be *free*, he says, is to *know* one's own mind (p. 381). And lastly, and most flagrantly, (4) Evil is merely the *intellectual incompleteness* incident to the restricted purview of 'finite' beings (pp. 113-115, 121-122, 340, 387, 389, 393, 396).

III.

(*E*) And so we come to the infinite being to which all else is 'appearance'. The Absolute appears early in Prof. Taylor's philosophy and stays to the bitter end. It is regarded as so axiomatic a principle that its derivation is somewhat perfunctory (pp. 53-61). We may, however, represent the steps of this derivation and the assumptions they involve as follows:—

[1] *Cf. Humanism*, pp. 55, 160-163.

1. The universe is ultimately a system [= an application *a priori* of a human conception to reality, depending on the validity of the 'ontological proof'].

2. If it is a system at all, it must be a rigid system, and "must finally have a structure" (why only *one?*) "of such a kind that any purpose which ignores it will be defeated". [But must not the sort of system which the universe is be determined by experience rather than *a priori?* And why should a system be absolutely rigid? Might it not be plastic, with no *predetermined* structure, but with potentialities of varying response to varying efforts? Determinism (which by the way Prof. Taylor professes to reject in book iv., chap. 4) is not so absolute a postulate that a determinable indetermination in Reality should be inconceivable. And why, lastly, should the purposes which ignore the Absolute be defeated by it? Why should there not be purposes which, though they ignore the Absolute, are ignored by it? Nay, is there anywhere an indisputably valid purpose which needs to take the Absolute into account?]

3. Hence to deny the Absolute would be to reduce the world to a mere chaos. [I have never found this to be so. And do we as a matter of fact *ever* import order into our experience by arguing down from the Absolute? Do we not rather start from apparent chaos, and work our way out by the most empirical experiments?]

4. The whole of Reality is the one and only perfect and complete individual (p. 113). ['*Complete*,' however, we must be careful to understand in a merely intellectual way as = 'all-embracing,' 'not omitting anything,' rather than as 'feeling no want'. And yet I doubt whether Prof. Taylor's readers will always succeed in distinguishing these two senses when they peruse his eulogies on the perfection and harmony of the Absolute.]

5. The Absolute is infinite experience, not like ours limited, and still less collective.[1] Though neither a self nor a person,[2] it is a conscious life which embraces the totality of existence all at once and in a perfect, harmonious, systematic unity,[3] as the contents of its experience. [But how, if it is *not* limited, can 'purpose' be ascribed to it? The time has surely come when the apparently self-contradictory notion of an infinite purpose should be either explained or dropped. How again can one life embrace another, *i.e.*, not merely *know* it, but *experience* it with its unique limitations? And this in an indefinite number of conflicting and mutually con-

[1] Pp. 343, 396. [2] Pp. 343, 346. [3] P. 60.

tradictory cases! Surely the difficulties of the *Kenosis* in Christian theology, of the combination of divine omniscience with human ignorance, are child's play in comparison with these vagaries of what calls itself a rational metaphysic!]

6. The Absolute is out of Time and Space and cannot evolve. Hence all things in our experience are for it contradictory appearance. But this does not mean 'illusion'. For (p. 109) there are degrees of Reality or individuality, and those things which are more complete and more systematic are more real. Or, put otherwise, things are more real the more they approximate to the ideal of perfect self-consistency and the less the modification which our knowledge would require to transform them into complete harmony with themselves (pp. 37, 105, 108).

On this I remark that by the time Prof. Taylor has proved Space and Time 'appearances' which cannot be attributed to the Absolute, he appears to have quite forgotten the vital distinction between perceptual and conceptual Space and Time which he began (p. 243) by calling of 'fundamental importance'.

This, however, is a slight matter compared with the 'saving doctrine' of the Degrees of Reality, in stating which Prof. Taylor does not seem to have materially improved its Bradleian form. (1) It still seems to be a pure assumption that what *appears to us* to be the order of ascertained reality, must coincide with the absolute order of merit. (2) Nor is it in the least self-evident that what seems to need less modification is actually nearer to ultimate Reality and more likely to attain it. The little more may be unattainable, and something worlds away may be on the right line of development. If *e.g.* Prof. Taylor had cast his prophetic eye on the Jurassic age would he not have prognosticated the descent of the fowls of the air from soaring Pterodactyls of the period rather than from clod-hopping Dinosaurs? And yet it is certain that the former never evolved into the true avian form, while the latter very probably did! (3) How, we may ask, are we to know *how much* 'modification' or 'transformation' a thing may need to become ultimate reality? For we cannot surely know this *a priori*, nor judge by casual appearances? How indeed can we tell what the difficulties really are until we have overcome them? For our finite apprehension, therefore, the doctrine of degrees is quite unworkable, and indeed unmeaning. And (4) the criterion in any case is quite delusive. For *ex hypothesi* it fails us: nothing ever *de facto* reaches ultimate reality, or can be conceived as so doing. We are carefully

warned that a 'finite' appearance could do so only by ceasing to be finite. But impossibility has no degrees, and hence to say 'you shall become perfectly harmonious and fully real when you become the Absolute' is like saying 'you shall catch the Snark on the Greek Kalends'.

7. Despite however the manifestly illusory character of our hopes of becoming real by becoming the Universe, we are still bidden to believe (p. 16) that the Absolute realises our aspirations and satisfies our emotions. Even though (p. 411) "the all-embracing harmonious experience of the Absolute is the *unattainable* [!] goal towards which finite intelligence and finite volition are alike striving," we must have faith (p. 394) that "all finite aspiration must *somehow* be realised in the structure of the Absolute whole, though not necessarily in the way in which we . . . actually wish it to be realised"! For (p. 386) "it is simply inconceivable in a rational universe that our abiding aspirations should meet with blank defeat". It is not to this final apocalypse that Prof. Taylor applies the incisive words "an uncritical appeal to unknown possibilities": but the phrase seems singularly apt.

Now that we have seen what the claims of the Absolute are, we can proceed to examine its logical foundations. No great acuteness is needed to perceive that the whole tissue of affirmations concerning the Absolute depends logically on the question whether the conception of a whole can be applied to Reality *a priori*, and whether consequently it can validly be taken as certain that Reality forms a harmonious system.

In other words the 'ontological proof,' *i.e.*, the transmutation of a conceptual ideal into absolute fact, is a vital necessity for Prof. Taylor's metaphysic. He himself is well aware of this, and furnishes us (pp. 402-403) with a revised version of it, drawn from the armoury of Bradleian logic.

Every idea, he tells us, has a reference to reality, outside its own existence, which it means or stands for. "In its most general form, therefore, the ontological argument is simply a statement that reality and meaning for a subject mutually imply each other." But (as we saw) thoughts represent the reality they mean with very different degrees of adequacy, and so, of reality. Only the thought of a perfectly harmonious system can be an adequate representation of the reality which it means. As therefore we have in the Absolute a way of thinking about Reality "which is absolutely and entirely internally coherent, *and from its own nature must remain so, however the detailed content of our ideas should grow in complexity*,[1] we may confidently say that such a scheme

[1] Italics mine.

of thought faithfully represents the Reality for which it stands".

In this form then the 'ontological proof' satisfies Prof. Taylor; but it hardly brings out what is really its cardinal feature, *viz.*, the *a priori* character of its claim. Unless reality can be predicated *a priori* of its ideal, the 'proof' is worthless for the purposes of absolutist metaphysics. For the conception of the Absolute must be valid of any and every course of experience in a wholly non-empirical and *a priori* way, to enable us to pronounce our knowledge and our opinion of it to be incapable of modification by the course of events. It follows that the Absolute must be *rigid*, and its conception one which differs radically in its nature and meaning from any other idea. For other ideas *acquire* their meaning in the process of experience, which moulds and modifies them, and is continually *testing the validity* of their 'reference to reality'. Their 'objective reference' is at first no more than a formal *claim*, which experience must confirm and develop and show to be really applicable. Whereas in the Absolute's case, the mere making of a claim, by reason I suppose of its peculiarly sweeping and impudent character, is held to be sufficient warrant of its *a priori* truth.

In other words Prof. Taylor's argument is a *petitio principii;* it amounts only to a covert re-statement of the contested claim. The dispute was whether a subjective demand of ours could authenticate the existence of something which satisfies that demand.[1] The 'proof' consists in reiterating that the meaning of the conception involves this same claim to reality. But what we still want to know is whether this claim can be sustained, whether reality will actually conform itself to our conceptions, whether the meaning we attribute to them is actually true. And to assure us of this we are given nothing but the Absolute's own assurance! This may be rationalism, but it seems far from rational.

And yet, of course, the facts are plain enough. The Absolute is a postulate of the extremest and most audacious kind. And so far from its being true that our concept's claim to reality is in this instance independent of experience, it is dependent upon every experience and distinguished from other such claims only by the greater difficulty of subjecting it to any adequate verification. The question of whether, say, my idea of 'dog' 'corresponds with the reality,' is easily settled by observing whether what I take to be a

[1] It is amusing that this should turn out to be essence of the 'ontological proof,' when one remembers how wroth rationalists get when they imagine that pragmatists are attempting this very feat!

'dog' behaves in the manner I expect a 'dog' to behave. But to establish that all Reality behaves in a manner conformable with my notion of a perfectly harmonious system, and that my notion may consequently be safely predicated of Reality is a desperate undertaking. Well might rationalists imagine that if it was not to be done *a priori*, it could not be done at all! For the claim is so large that its empirical proof might well seem impracticable: because the Absolute is all-embracing, the claim has to be substantiated in the case of all things in existence.

Of course it can still be postulated, and indeed this may be expedient. For it is doubtless methodologically just as judicious to give the universe, as the dog, a good name, if you do not wish to quarrel with it. But to prove my postulate, to make sure that the universe really deserves my praises, and that my eulogy is not a fabric of adulation on a basis of desire, I should have to be in a position to explain away every trace and appearance of disharmony! It is only our interested bias, therefore, that leads us to argue[1] that the apparent evil must be really good. If we were quite impartial, *i.e.*, void of interest in the matter, it would be intellectually just as easy, and as tenable, to infer that the apparent good was really evil.

That the Absolute is really a postulate is all but conceded by Prof. Taylor in one passage,[2] where he argues that as it is the satisfaction of a human aspiration, and as his peace of mind depends on speculation about it, it must be regarded as pragmatically 'useful,' and therefore valid.

To which I reply that the path from usefulness to validity leads through verification. Not that Pragmatism has the slightest objection to the principle of an Absolute *conceived as a postulate*. And if it makes Prof. Taylor happy to believe that there is such a thing, and he won't be happy till he gets it, by all means let him try it, and see whether it will give him his heart's desire. In matters of postulation all are called, and all may hope to be chosen. But this reduces the claim originally made. The Absolute was put forward as an actually existing reality which no sane intelligence could deny. What we rejected was a pretended axiom of universal cogency; what it may yet be possible to retain is a queer sort of emotional postulate.

And yet I wonder whether the Absolute, after undergoing so capital a diminution of its logical status, will continue to find favour with our metaphysicians. It was cherished

[1] As Prof. Taylor does on p. 396. [2] P. 317 note.

in the first place as a response to a supposed necessity of thought, that of conceiving the universe as one, *i.e.*, as a systematic order. This has turned out to be a mere craving, and a doubt has arisen as to whether this postulate fully understands its own nature. Is it really all that we need demand of our experience that it should be an ordered whole? Do we not demand also that its order should be worthy of our *approbation?* To any one not pledged to intellectualism at all costs, the thesis must seem indefensible. For the demand for *intellectual* order is but part of a greater *moral* claim, without which it is not really intelligible. For what has happened? We claim to have been enabled by the 'Absolute' to think the universe as a whole: but only by *leaving out*, as irrelevant and unreal 'appearance,' all of its initial features. The result is the self-contradiction that the world becomes a whole only by extruding its parts. Surely a grotesque derision of our postulate! To satisfy its real meaning, therefore, we must retrace our steps, and argue either that the world is not a whole at all, if that conception involves the reduction of all empirical reality to illusion, or that if it is, the conception has been grossly misconceived, and must be amended in such wise as to admit of a real interaction of the world's constituents, of a real purpose, and a real history, and a real achievement of a good end. Either, therefore, it is no use to postulate an Absolute, because as conceived it cannot explain the facts of experience, or we must postulate an Absolute which is plastic, and not rigid, and not subversive of the 'appearances' in which we live.

But this latter alternative is ruled out by the other main incentive to Absolutism. The Absolute was cherished in the second place as a means to what all Rationalism craves, *viz.*, an indefeasible guarantee against the contingency of experience. This needs, perhaps, a word of explanation. When we have seen that as there is no such thing as 'pure reason' we can no longer define the rationalist as one who is guided by it, it becomes necessary to redetermine his essential type of mind in pragmatic terms. And when we make a psychological study of his character and his works, we shall find that his master passion is not so much a love of reason as a *fear of experience*. I should define him, therefore, as essentially a person who *will not trust experience*, who wants at all costs to be insured against the risks, surprises and novelties of life, and to feel that, in principle, nothing can occur which has not been provided for in the closed circle of existence. Regarding them from this point of view we see that all the infinite convolutions and

contortions of *a priori* philosophies mean just this, that the contingency of the future, the dependence on experience of what most we value, must 'somehow' be eliminated. It was thus as a method of satisfying a natural (and not wholly ignoble) instinct that rationalists had recourse to the Absolute. But its power to satisfy this emotional demand *depended on its strict apriority to all experience.* It is not enough that the universe should really be a harmonious system and that we should *gradually* come to 'discover' this. It is not enough that the potential harmony should be a valid postulate which we may help to realise. What was demanded was an initial and absolute assurance beyond all possibility of peradventure. And if the ontological argument is disallowed, the Absolute no longer yields this. Why then should it continue to be postulated?

But may not the Absolute still retain its place as a postulated satisfaction for other desires? I hardly think so. Man craves no doubt for an object of worship, and when in sore distress will worship almost anything. But how can the Absolute afford him this satisfaction, if finite minds can hardly worship it without "a certain element of intellectual contradiction" (p. 399)? Again, we desire a moral ideal: but though Prof. Taylor invokes the doctrine of degrees to show that goodness possesses more reality than badness, and that therefore the Absolute is not morally indifferent, he is driven to confess that it is "not one of the combatants; it is at once both the combatants and the field of combat".[1] Again, those of us in whom intellectual abstractions have not dried up the fount of human sympathy and feeling desire *at least* an explanation of the existence of Evil (pending the achievement of its entire obliteration): but what is the response to this demand which Absolutism proffers? It regards Evil merely as the necessary incompleteness of the parts of a whole! It is difficult to discuss this proposition in a temperate manner. For all I know there may be people intellectualist enough callously to contemplate the dismembered corpses on a reeking battlefield and to say: 'That only shows how incapable the parts are of becoming the whole'. But that this defect is regarded as the source of all evil is certainly not true, *psychologically*, of ordinary human feeling. Man is not miserable because he is not the universe, but because he seems to be flung without rhyme or reason into a discordant scheme of things, and exposed to cruelty, injustice and disappointment, disease, decay and death. I should

[1] P. 399 note.

imagine too that a desire to be the Absolute was a sufficiently rare idiosyncrasy. Certainly I myself have no trace of it; the prospect would appal me, not only because of its responsibilities, but also on account of its dulness.[1] Prof. Taylor, of course, may be differently constituted. If so, psychologic science should certainly record this curious fact about him; but I sincerely hope that there may be an error in his auto-diagnosis, and that his grievances are really of a more human calibre. And *logically* also the proposition that *because the Whole is perfect, all its parts must be imperfect* seems far from obvious: to me it would seem far more plausible that *if the Whole were perfect, all its parts must be perfect too*, and that if any part so much as *seems* imperfect, the Whole *cannot* be perfect. And why, to raise a prior question, should it be assumed, *apart from our interests and desires*, that a whole is necessarily perfect? Why should not the intrinsic scheme of things be evil at the core, *i.e.* utterly discordant or imperfect in any namable degree? Has any philosopher the right to allow his intellectualist proclivities to burke the whole question of pessimism in this flagrant way?

It would seem, then, that regarded as a postulate the Absolute is a *bad* one, *because it does not work*, nor secure us what we wanted: regarded as an axiom it stands—and falls—with the ontological fallacy. Is it not therefore as a mere private fad, rooted in the idiosyncrasy of a few philosophic minds, that it can continue to figure, and that we must continue to respect it? But will not those who desire real answers to the real questions of life more and more audibly protest against the emprisonment of all human thought in the dismal void of the conception of a Whole which can neither be altered nor improved, and demand the liberty to think the world as one in which progress and goodness can be real?

[1] For the Absolute, were it conscious, would have, I suppose, to be a solipsist.

IV.—PLATO'S VIEW OF THE SOUL.

By Eric J. Roberts.

Plato did not, like Aristotle, devote a special treatise to the investigation of the nature and functions of the soul. On this, as on many other subjects, his views have to be collected from more or less incidental references scattered throughout the dialogues: and, owing to the—we might almost call it romantic—method of exposition which he adopts, it is not always easy to determine what degree of importance he means us to attach to his statements. In attempting, therefore, to give systematic formulation to his beliefs regarding the soul we must take account of the differing standpoints from which he approaches the subject: as also, of the order in which the dialogues are most likely to have been written: for during the fifty years or so over which Plato's literary activity spread itself his views underwent considerable changes.

The bulk of the material with which we have to deal is contained in the *Phædo*, *Phædrus*, *Republic* (bks. v.-vii. and x.), *Timæus*, and *Laws*. But there are fragmentary passages in several of the other dialogues which must also be considered.

With regard to arrangement we shall adopt Lutoslawski's conclusions, according to which *Symposium* and *Phædo* are put after the Socratic dialogues in what he calls the "First Platonic Group," *Republic*, ii.-x., and *Phædrus* belong to the "Middle Platonic Group" extending to about 379 B.C., these are followed at some interval by *Theætetus* and *Parmenides*, while to Plato's latest period are to be assigned the *Sophist*, *Politicus*, *Philebus*, *Timæus*, and *Laws*, in the order mentioned: the two last-named, and probably also the *Philebus*, being written after 361 B.C.

Socrates in the Phædrus (270 C) is represented as maintaining that it is impossible "to comprehend satisfactorily the nature of the soul without comprehending the nature of the universe (τὸ ὅλον)". Similarly we may say that in order to a right understanding of Plato's conception of the soul it is necessary to consider it in relation to his scheme of exis-

tence. But first of all it is important to notice the twofold aspect under which the soul was regarded by Plato, *viz.*: as the subject of knowledge or of cognitive activity in general (*v.* especially *Meno*, *Phædo*, *Repub.*, *Theæt.*) and as the principle of movement or of life (*Phædr.*, 245; *Repub.*, 611; *Laws*). For Plato meant by the soul that which exercises these functions, and only with respect to them can its place in the scheme of existence be determined. This way of regarding soul was in accord with current ideas (*cf. Arist. de An.*, I. [2]). Throughout Greek literature the primary meaning of the word ψυχή was 'vital force'; and if the conception—now pre-eminent—of soul as the centre or spring of intelligent personality had not previously received explicit formulation it was yet assuredly latent in popular as well as philosophical thought on the subject. The various experiences of thought, will, and emotion which we allude to by the term 'psychical activities' had—so far as they formed topic of reflexion—never been referred to aught but soul as their seat or subject. [It is to be noted, however, that in earlier times these activities had been attributed to the smoke-soul or blood-soul (θυμός), from which ψυχή was distinguished as —so to say—the 'vital spark' which was separated from the body at death (*v.* Homer, *e.g.*, and *cf.* Gomperz' *Greek Thinkers*, book ii., chap. v., § 7, and C. F. Keary on 'The Homeric Words for Soul' in MIND, O.S., vol. vi.). But as the only soul which Plato knew was ψυχή this distinction had no existence for him: although an interesting parallel to it may be observed in the *Timæus*, where he speaks of a mortal and an immortal soul.]

By Plato the two functions of motion and cognition are at first treated side by side. Beyond attributing them both to soul, he makes no attempt to establish a connexion between them. It is only later, in the *Timæus*, that he expressly represents them as modes of one activity (*cf.* also *Soph.*, 249). Throughout the dialogues, and especially in the earlier ones, chief prominence is given to the soul's cognitive function: and in this connexion Plato lays stress upon the radical difference of nature that obtains between the soul and the body. This antithesis was prevalent in Orphic doctrine and had become rooted in common belief. Even those nature-philosophers whose monism required them to venture an explanation of soul in physical terms, and who did not recognise cognitive activity as its main characteristic, had still perceived the need for distinguishing soul from the rest of the universe as completely as their main postulates would allow. (Anaximenes, for instance, held ψυχή to consist, like σῶμα,

of the all-constituting ἀήρ ; but ψυχή was the most rarefied form of ἀήρ, whereas body was thick and condensed.)

But by Plato this antithesis is sharpened into a dualism corresponding to, and finding confirmation in, the dualism of his ontological scheme. The ideal of knowledge which, under the influence mainly of Eleatic and Socratic teaching, he had been led to form, required him to conceive of the objects of knowledge as fixed and unchangeable, and as on this account essentially different from the ceaseless flow of particulars perceptible by the senses. Knowledge for him consisted in the apprehension of truth, *i.e.* of true being, of absolute reality (*Phædo*, 65 *sqq.* ; *Repub.*, 585 C, 508-509 ; *Theæt.*, 186) : for, as Lotze points out (*Logic*, bk. iii., chap. ii.), he drew no distinction between the true and the real, between the valid and the existent. The real, then, being characterised as changeless and consequently incorporeal, the changing objects of perception were relatively unreal. Existence was divided into two classes—on the one hand the world of true Being (οὐσία), consisting of Ideas, the objects of knowledge (*Repub.*, 477), and on the other hand the realm of Becoming or generation (γένεσις), with which opinion based on sense-perception was concerned. There is reason to suppose that this distinction was never really abandoned by Plato, although he qualifies and supplements it in various ways. It is maintained in the *Philebus* (59 A) as of equal authority with the fourfold scheme there introduced, and it is reaffirmed very definitely in the *Timæus* (27 E, 51-2 ; *cf.* also *Laws*, 894 A).

The body, Plato teaches, evidently belongs to the world of generation, but the soul is 'like' or 'akin to' the Ideas. The precise nature of this relationship or affinity (ξυγγενεία) between the Soul and Ideas he does not define ; what he is desirous of emphasising is the fact that there is a relationship of some kind. For he holds that without it knowledge would be impossible. Affinity is the condition 'in virtue of' which the soul 'contemplates' or 'apprehends' true being (*Repub.*, 490). Now, inasmuch as this activity of apprehension or cognition could likewise be exercised with regard to the changeable, we might suppose that in this case also affinity must be postulated. Alcmæon, Empedocles, Diogenes of Apollonia, Democritus had—each in his own fashion—made some such hypothesis the basis of their respective theories of sense-perception. Plato, however, influenced manifestly by ethical as well as ontological considerations, tends to deny that there is any essential relationship between the soul and the objects of sense. All intercourse with them, he held, vitiated the soul (*v.* especially *Phædo passim*).

For truth and the Good were to be regarded as one, and knowledge *pro tanto* as identical with virtue. What was in antithesis to knowledge was therefore in antithesis to virtue, and consequently the soul could not in its true nature be connected with the world of generation.

Cognitive activity as such was the same whatever might be the nature of the objects towards which it was directed, and the soul was its single subject. But the conditions under which the activity could be exercised, and the results it could attain, differed according to the different character of the objects dealt with. In apprehending sensible objects the soul had to act "through the bodily faculties," "the organs of sense"; whereas it was capable of contemplating the Ideas "through itself" immediately (*Theæt.*, 185 E, *cf. Phædo*). What resulted was in the one case sense-perception, in the other knowledge; and these results were regarded by Plato as so radically distinct from one another that he was constrained to postulate a similar antithesis between the processes employed in reaching them. He came to regard these as two distinct activities, assigning to them the names of Sense (*αἴσθησις*) and Reason (*νοῦς*) respectively, and referring them each to a different part (*μέρος*) of the soul (*Repub.*, 532, and *cf.* 490, 611). Such references are of course metaphorical, for Plato would not have admitted that the soul consisted of concrete divisible substance. The point on which he is concerned chiefly to insist is not so much the separateness of the parts as the difference in value between the two employments of the soul's cognitive activity. It is the character of the object, ideal or phenomenal as the case may be, that alone gives to the function exercised upon it specific character and, in a teleological reference, determines its value (*cf. Repub.*, 524 B). And this is but to say, in other words, that Plato's doctrine of psychical activity is "epistemological rather than psychological" (Adamson), the epistemology moreover being dominated by ethical interests. He was reluctant to admit that activities concerned with two fundamentally opposite orders of objects, and giving rise to results ethically disparate, could yet be one in kind.

Plato certainly has to admit that in so far as the soul deals with sensible objects it is brought into kinship with them; but he holds that in so occupying itself it is untrue to its nature, it is turning its activity in the wrong direction (*Repub.*, 518). When it acts according to its true nature it concerns itself exclusively with the eternal realities, because of its affinity with them (*Phædo*, 79; *Repub.*, 611). "To understand its real nature we must fix our attention on one

part of it exclusively . . . on its love of wisdom" (*Repub.*, 611), and 'wisdom' is that state of the soul in which it "deals with" or "apprehends"—"of its own self," and not through the senses—"the pure and eternal and immortal and unchangeable" to which it is akin (*Phædo*, 79).

But the relationship which is denied so far as the soul's cognitive activity is concerned has to be admitted with respect to its function of movement. As the principle of self-motion (*Phædrus*, 245), or of life (*Phædo*, 105 C, and *cf. Laws*, 895, where life and self-moving power are identified), the soul is undeniably connected with the world of generation as the "source and beginning" of the motion which characterises everything belonging to that world. It does not seem likely that in the *Phædrus* Plato is using the conception—which appears in later dialogues—of a universal soul. He probably means that the kind of motion that is to be attributed to soul must be regarded as more original in character than that which is manifested in external nature. The latter kind of motion, he held, must in every case be due in the first instance to motion in a soul, otherwise it would be quite inexplicable. Beyond speaking of it as self-originated Plato does not tell us what is the nature of the soul's motion, nor distinguish it from the mechanical motion which he considers to be dependent upon it. We might suppose that he had the phenomena of volition in view did we not know that he included will-power in reason (*Repub.*, 441 E, *v.* Lutoslawski, *Origin and Growth of Plato's Logic*, p. 278), and that at this stage he regarded reason as incompatible with change.

According to Plato's doctrine, then, the soul possesses two quite distinct but equally essential characteristics—cognition and motion, of which the former connects it with the world of eternal reality, the latter with the world of ceaseless change. At the same time the soul has an identity of its own and is not absolutely merged in either world. It possesses reason in common with the Ideas, motion in common with the world of generation; but this very fact that it presents features which unite it to the two opposite realms of existence at once is proof that its nature is to be distinguished from both. A certain degree of difference is implied also in the term 'kinship' (*ξυγγενεία*) which is used to express the connexion between the soul and Ideas: for kinship is not predicable where there is no differentiation. And from the terms in which the functions of the soul are described a more definite inference can be drawn. For on the one hand as 'apprehending' or 'contemplating'

the Ideas the soul must be considered to occupy a lower plane of existence than they do, and on the other hand as the self-moving, while it is connected with the world of generation, it is yet superior to all the other elements and objects of that world, it does not take its rise in the same fashion as they do (*Phædr.*, 245). "All that is soul presides over all that is without soul" (246 C, and *cf. Laws*, 892, and 966).

We conclude then, with respect to the earlier form of Plato's theory, that soul must be regarded as holding a position intermediate between the two realms of existence (*cf.* Zeller, *Plato*, ch. vii., n. 136), and as reproducing in itself the antithesis which they present. This conclusion is not, however, one which we need suppose Plato himself to have recognised as necessary. For in the dialogues to which we have been referring it is with the ethics rather than with the ontology of the soul that he is primarily concerned. Thus in the *Phædo* stress is laid upon the soul's affinity to the Ideas in order to demonstrate its immortality, and this with a view to showing that it is a philosopher's duty to be unperturbed in prospect of death. So too in the *Republic*, whenever the constitution and destiny of the soul are discussed it is with reference to the central question as to what sort of life human beings ought to live. In the *Phædrus* myth also the ethical note is prominent. The truth seems to be that when Plato wrote these dialogues he was not aware of any problem as regards the soul's ontological status. So far as concerns his Theory of Being the soul was an unexamined presupposition. From an epistemological standpoint he enlarges upon its necessary affinity to the Ideas, and in the domain of physics he postulates its existence as the originator of motion. But while he thus discusses its position with reference to each of the two terms in his scheme of existence he does not seem to realise that no place in that scheme is actually provided for the soul itself. As already shown, it cannot, for ethical reasons, be reckoned among the particulars of the world of generation: and even if, like them, it could be said to have in the eternal world an Idea corresponding to it, it could not, like them, be said to depend for its existence upon its Idea. Nor can it, on the other hand, hold rank as itself an Idea: for not only does it possess the attribute of motion, while the Ideas are unchanging, the very fact that it knows them is sufficient to distinguish it from them. Although it is not by any means certain that, as Mr. Archer Hind maintains (note to *Phædo*, 105), Plato would have been ready to posit an Idea of soul, at the

same time had he done so we should not have reason to regard the metaphysical entity thus created as in any degree more "monstrous" than the rest of its tribe. For, on Plato's premisses, if the soul were known, then as object of knowledge to itself it must necessarily be an Idea. Of course as Idea it would be, like the other Ideas, distinct from the soul as knowing subject. But unless there were an Idea of soul how could soul be known, the Ideas being by hypothesis the only objects of knowledge? Since, however, we have no ground for supposing that Plato did postulate an Idea of soul, we must suppose the problem regarding the soul's knowledge of itself to be among those which he overlooked.

This anomalous position of soul as excluded from the scheme of existence may be taken, then, as pointing to certain defects of that scheme—defects which the very conception of soul might have helped to remedy. For if Plato could maintain the unity of soul in spite of its supposed opposite characteristics, then surely the respective spheres of existence to which in virtue of these characteristics it bore relation were not so absolutely disparate in nature as he represented them to be. The recognition that soul was related to both spheres might have led to the discovery that only for soul were they separated, that only for soul were they at all, that soul was indeed the reality of both, in other words that they had no existence save as elements in a unitary experience. How far Plato moved in the direction of such a discovery remains to be seen.

In truth the Ideal theory as first presented had an abstractness and onesidedness which prevented it from being an adequate solution of the problem it was framed to meet. The twin facts of knowledge and opinion called for explanation. The Ideas were conceived of as having the necessary characteristics of objects of knowledge, and over against these were set the particulars of sense as sufficiently accounting for the admitted relativity and incertitude of perceptive opinion. But an explanation to be satisfactory should be self-consistent, and if the Ideas were to be regarded as truly real and all-explanatory it should have been possible to explain from them the existence and nature of the things of sense, as also the relation of these to the Ideas. Change and the unchanging, however, are in radical contradiction to one another and the latter can never be assumed as principle of explanation for the former; and, as for the connexion between the two, Plato himself finds it necessary, in the *Parmenides*, to reject as illogical the various metaphors (*παρουσία, κοινωνία, μέθεξις, μίμησις, ὁμοίωσις*) by which he had

endeavoured to represent it. The soul, again, as we have seen, was a third kind of entity of which no explanation was afforded, although it, no less than the Ideas themselves, was an essential presupposition of knowledge.

Evidently there was need for a sort of 'Copernican change,' in the Kantian sense of the expression, if any approach to a more adequate theory were to be made. And this is in fact what we find taking place in the later dialogues. The Ideas by degrees vacate their position of transcendence and are seen to be dependent upon soul. Thus, as Lutoslawski puts it (*loc. cit.*, p. 413), "the centre of gravity of the Platonic system" changes, and it is to soul, as the source at once of the Ideas and of motion, that supreme reality is accorded.

Of necessity there is involved in this change much more than a mere re-adjustment of the factors that were arrived at as the result of the original analysis. A new investigation is undertaken, and the scheme of existence is gradually reconstructed, increasing attention being given to the subjective factor. For all that, however, Plato's fundamental dualism continually reappears. Although in one regard the soul may be considered as principle of intermediation between the intelligible and the sensible, yet the abstract opposition between these two realms is still maintained. And, in addition to this, the new prominence given to the soul as the subjective factor in knowledge brings to light a new dualism, *viz.*, that between the soul on the one hand and its antithetically related objects on the other. Moreover the references to two kinds of soul point to a yet further dualism within the subjective sphere itself, corresponding to the dualism originally postulated between the two classes of the objective world.

The beginnings of this reconstructive process are discoverable in the *Theætetus* and *Parmenides*. In the former of these two dialogues the objects of knowledge are represented rather as categories—*i.e.* subjective notions—of state and relation than as self-existent ideas, and the soul's cognitive function undergoes a closer analysis than any that is to be found in the earlier dialogues. Again, whereas in the earlier dialogues the soul in its progress towards a knowledge of the Ideas was supposed to use as a stimulus the relations which sense-objects disclosed to it (*Phædo*, 76 ff.; *Repub.*, 523), in the *Theætetus* those relations are represented as themselves objects of knowledge, discoverable not by means of the senses but by the activity of judgment or comparison proper to Soul alone (185 *sq.*). Further, certain qualities of relation (*e.g.* magnitude and number) which in the *Phædo* (100 *sq.*) were

represented as pertaining to objects in consequence of the immanence of the relevant Ideas are in the *Theætetus* shown to be the outcome of activity or change (155). Inasmuch, then, as soul is the source of change, it is perhaps possible to detect here an indication of the process by which soul is being exalted to the position of supremacy previously held by the Ideas.

In all this there is no explicit renunciation of the Ideal scheme, for the *Theætetus* is less directly metaphysical than either the *Phædo* or the *Republic*. Nor is there any attempt to determine the kind of existence to be attributed to the soul. Such psychology as the *Theætetus* contains is introduced subordinately to the epistemological discussion, just as the psychology of the *Phædo* and the *Republic* is subordinate to ethics. But the expressions of uncertainty used (184 D) regarding the soul may indicate that in giving closer attention to its function Plato had begun to be aware of problems regarding its nature. [The separate senses "manifestly unite into one nature (*ἰδέα*), call it the soul or what you will" (*Theæt.*, 184 D).]

In the *Parmenides* the absolute separation of Ideas and particulars is definitely rejected, although scarcely any mention is made of the soul. In the course of the argument the suggestion is put forward that the Ideas may be conceived of as thoughts in the soul, or, again, as fixed types in nature. Neither suggestion is repudiated, but both are shown to be incompatible with the former hypothesis of transcendent Ideas.

In the Sophist, from the familiar assumption that that which is truly real is the object of knowledge, it is argued that to the truly real belongs the capacity of being affected, *i.e.* motion, for knowledge is admittedly activity. Again, motion and life and soul and mind are mutually concomitant and it cannot be imagined that the highest reality is devoid of any of them (248-249). Thus we see that the fact of knowledge remains fundamental for Plato, and that he is allowing increasing importance to its presuppositions on the subjective side. The activity which knows, life in its aspect as mind or soul, this is what he now recognises as the supreme reality. In this way the dualism between the real and the changing has been departed from.

In the *Philebus* existence is divided anew into four classes: (1) the limit, (2) the unlimited, (3) the mixed that is generated out of these two as its elements, and (4) the cause of the mixture. It is probably beside the mark to suppose that any one of these classes corresponds to the

Ideas of the earlier scheme. By the 'mixed' Plato seems to have meant the realm of concrete existence, all that is the determinate outcome of γένεσις (26 E), while the limit and the unlimited represent respectively the formal and material elements of that realm discoverable by logical analysis. We may note here a certain similarity to the Kantian account of experience as a combination of sense-manifold and logical forms. But Plato, like Kant, finds that besides these a further factor is necessary to make experience possible—a factor which he names the agent or cause and which he identifies with mind or wisdom. Kant named this factor the Ego or unity of apperception, and represented experience to be the outcome of its synthesising activity. He distinguished, however, between the empirical and the transcendental Ego, the one being a psychological phenomenon the other a logical abstraction. In somewhat similar fashion, Plato, having postulated soul as that in which mind and wisdom are contained, argues from the soul which acts as organising principle in the individual to a supreme soul in the universe, from which the souls of individuals derive their being (*Philebus*, 30 A).

It is to be observed that while four classes of existence are thus distinguished the classes are far from being co-ordinate with one another. The first two have place only as elements in the third; and the main division would appear to be that between the mixed and its cause the soul. The fact that there is present in τὸ μικτόν the element of determinateness—τὸ πέρας—explains how it is possible for τὸ μικτόν to become object of cognition to the soul. It is to be noted, however, that Plato still retains the antithesis between γένεσις and οὐσία, the latter being characterised as "eternal and unchangeable and unmixed" (59) and as the highest object of cognition. The real advance, then, that he has made in this dialogue consists in that besides according supremacy to the soul he has recognised the importance of the world of γένεσις and shown in what way it may be considered as to some extent intelligible. In place of a scheme in which Ideas and particulars are set over against one another and the soul is almost completely disregarded, we have a scheme in which the soul occupies a position of supremacy, while objects are recognised to be dependent upon it and to be essentially complex in character.

The fact that in the "fanciful" classification of human goods at the end of the dialogue νοῦς is assigned only the third place need not blind us to the real supremacy that from the metaphysical point of view is accorded to the soul as

constitutive alike of individual experience and of universal reality. For it is to be remembered that Plato did not, like Kant, assume experience and reality to be radically discrepant with one another. The same postulates were regarded by him as at once the logical conditions of experience and the constitutive elements of reality. So that in its perfected form experience would coincide with reality. Hence while Kant taught that all experience was for a thinking subject, for mind, but that reality was "for itself," and in no way accessible to human knowledge, Plato represented experience and reality as alike due to the causal activity of soul.

This conception of the soul as causal principle in the universe may reasonably be regarded as the outcome of two notions which appeared in the earlier dialogues, *viz.*: the notions (1) of mind as the final cause of all things (which Anaxagoras had enunciated but had failed to develop) (*cf. Phædo*, 97 *sqq.*), and (2) of the soul as the originator of motion (which Plato probably derived from Alcmæon). These two notions taken together lead by a natural extension to the notion of a universal soul sustaining and ordering all things.

In the professedly mythical account of creation given in the *Timæus* this universalised conception of soul reappears as a teleological postulate. We are told that the universe—*i.e.* the world of generation regarded in its entirety—could not be, as it is, the best possible had not the creator implanted in it soul. Only on the assumption that soul is everywhere present can the orderly motion which characterises the universe be explained. The world as ζῷον is ἔμψυχον, and in being ἔμψυχον it is also ἔννουν—instinct with reason (*Tim.*, 30 B): for if soul appertains to body no less does reason appertain to soul. And to this fact, evidently, is to be traced the orderliness, the rationality, of the world's motion, since all motion due to soul must necessarily take place under the guidance of reason—the activity which contemplates the Ideas.

In accordance with this conception of it as combining in itself the activities of motion and of cognition, the world-soul is described as of composite formation, a blend of all modes of existence and activity—Ideal or archetypal ("undivided") and phenomenal ("divided") alike (*Tim.*, 34-35). By the "indivisible" elements of Being, and of the Same and the Other, which enter into soul Plato would seem to indicate that, whether regarded from the point of view of existence or of activity, of its nature or of its function, the soul shares in absolute reality; and by the "divided" elements —κατὰ τὰ σώματα—of these three—Being, the Same, and

the Other—he would seem to indicate that soul is as it were distributed throughout the multiplicity of the generated, appertaining in some way to, or being manifested in every changing object, and always carrying with it its motions of the Same and of the Other—the activities of thought and perception. For every portion into which soul is divided contains within it all the three components, is homogeneous with the whole (*cf. Phædo*, 93 A-94 B, "the nature of all souls is to be equally souls").

One result of admitting corporeal ("divided") existence as a constitutive element of soul is that for the soul to apprehend the sensible, and so generate opinion, is no longer regarded as an illegitimate use of its activity. The "λόγος" of the soul—what it declares to itself—"is true alike whether it deal with the Same or with the Other" (*Tim.*, 37). Opinions and beliefs, as well as knowledge, have truth (*ibid.*); although, presumably, in the case of the former the truth is only relatively absolute, holding only of the sensible.

We may note also that the soul's cognitive and motor functions having been thus combined tend, further, to become identified. For in attributing alike to soul and to what is physical (or corporeal, τὸ σωματοειδὲς, *Tim.*, 36 D) the motions of Same and of Other, Plato would appear to represent the cognitive activity of soul, in both its aspects, as cognate with physical motion. In this way there would seem to be indicated a certain unity of nature between the soul and the world of generation, making explicable the relation of causality which had been asserted in the *Philebus*.

A similar conception prevails in the *Laws*, where the universality of soul and its priority to all the generated is repeatedly emphasised. Soul, we are told, is "the primeval element" (892 B); it is "the first origin and moving power of all that is, or has become, or will be, and their contraries," and is "prior to" and "ruler of" the body (896). In 967 B it is argued that if the sun and the stars "had been things without soul, and had no mind, they could never have moved with a numerical exactness so wonderful". The net purport, then, of Plato's much-bruited doctrine of a 'world-soul' we may conclude to be as follows, *viz.*, that the whole universe must in some way be accredited with soul because its motion is rational, *i.e.* to say, exhibits calculable features (*cf. Laws*, 898).

Logically, as we have seen, the conception of the soul of the universe is derived from that of the human soul. The human soul was postulated in order to account for the facts of knowledge and movement, and the universal soul was

assumed as the source of human souls and as the ground and explanation of the intelligibility of existences and of the orderly movement of the heavenly bodies. Plato, however, unaware that he is dealing with abstractions, reverses the logical relation and represents the human soul as somehow dependent upon the universal soul. In the *Philebus* the soul of the universe is spoken of—vaguely enough—as the source of the human soul, the latter being a derived copy of the former. Doubtless the only way in which the distinction could be more expressly determined was by resorting to more definite metaphors, as is done in the *Timæus*. There the human soul is represented as a part of the world-soul enclosed—so to speak—in a mortal body. It is said to be composed of the same elements as the world-soul but in a less pure state (41 D). Thus the world-soul would appear to be considered as an ideal of which human souls are imperfect realisations, just as in the world of objects the Ideas rank as ideals which are imperfectly represented by the generated particulars.

In the *Timæus* we are further told (43 *sq.*) that when the soul enters into combination with the body the elements which have affinity with the body tend to preponderate, and their motions to become violent and irregular. Indeed the opposition to the true divine nature of the soul is so marked as to make it necessary to suppose that a second soul, a "mortal soul," is built into the trunk of the body: the "immortal soul" residing in the head, so as to escape pollution as far as possible, and to secure to νοῦς its rightful supremacy (*Tim.*, 69 C, and 90). The mortal soul, again, is divided into a nobler and a baser part. Thus three forms or kinds (εἴδη) of soul dwell in us, "in a threefold manner" (τριχῇ) (*Tim.*, 89 E).

This is evidently a re-statement of what had already appeared in the *Republic* as to the three forms of activity—Reason, Spirit and Appetite—of the soul, and had been indicated in the *Phædrus* by the figure of the charioteer and the two steeds. Obviously this attribution of triplicity to the human soul is made from an ethical standpoint, and is an attempt to give explanatory formulation to the various and apparently conflicting tendencies which soul-activity manifests in the experience of every individual. Except in the *Phædrus*—and even there the ignoble horse belongs to the 'human' soul and not to the 'divine'—it is to be noted that the 'three parts' are only attributed to souls in combination with earthly bodies. This is an indication that they are not thought of actually as 'parts,' but merely represent modes of

the soul's activity, of which those that exhibit antagonism to what is rational are conceived not to appertain to soul in its true nature but to be a development altogether incidental to its manifestation in human life. The main division, however, as Mr. Archer Hind points out (Introduction to *Phædo*, p. 27), is "dual not triple," and is influenced by—or rather is another expression of—the broad antithesis between the absolute and the imperfect which runs through all Plato's thinking. Having cleft existence asunder into that which is known by reason alone and that which is apprehended by sense it is only natural that he should make a like cleavage in the human soul between pure intelligence or reason and every sense-tainted activity. Nor is it surprising that he should further find it necessary to suppose (*Laws*, 896) that there are two world-souls—one the author of good and the other of evil.

But although this dualism remained with Plato to the end there are many indications of attempts to qualify its absoluteness. The movement towards unity apparent in his ontological theory reflects itself in his psychology—whether with reference to ethics or to the process of knowledge. Although the general tendency of his ethics was towards an ascetic intellectualism, consequent upon the view which regarded reason, in abstraction from sense-activity, as the essential characteristic of soul; yet his theory of education shows that he conceived of the relation between the soul and the sensible universe in no merely negative fashion. In the *Phædo* he teaches that the body is a hindrance to the soul, preventing it from reaching pure truth; but at the same time he admits the part played by sense-perception in conveying to the soul suggestions of those Ideal realities of which in its perfect state it had had cognisance. And in the *Republic*, where the Idea of the Good is represented as an organising principle in the universe and in knowledge, express and detailed recognition is accorded both to the value of habit in the formation of virtuous character and to the use of the sciences as stepping-stones towards the knowledge of the truth.

The immortality of the soul is frequently adverted to in the dialogues and was apparently one of Plato's most cherished convictions. In setting forth, in the *Phædrus*, "to investigate the truth with regard to the nature of the soul, both human and divine," Socrates begins by affirming that "every soul—soul as such—is immortal". From the argument adduced in support of this proposition it appears that by immortality is meant indestructibility—the soul can never

cease to exist and to exist as soul (*Phædr.*, 245 ; *cf. Repub.*, 611 A, "always existing and therefore immortal"; *Phædo*, 105-106, "immortal, indestructible, imperishable"; *Laws*, 966 D, "perpetual existence"). The proof turns upon the identification of soul with the power of self-motion. As the self-moved everything that moves is dependent upon it. Thus its continued existence is bound up with that of the whole created universe—were it destroyed "the whole heavens and all creation would collapse and come to a standstill" (*Phædr.*, 245). It is to be noted that the same argument involves as well that the soul always has existed as that it will always continue to exist. The myth thus prefaced indicates in pictorial fashion the nature of the successive manifestations through which souls may be supposed to pass. Its main purport is to explain and commend the soul's love of wisdom : and it is with this feature of soul that immortality (including pre-existence) is most fundamentally connected in Plato's thinking. This connexion is very prominent in the *Phædo*, where—although the argument has in the end to fall back upon a position very similar to that assumed in the proem to the *Phædrus*-myth—yet what is considered to afford the strongest presumption in favour of the soul's immortality is its close resemblance and affinity to the divine and eternal, as implied in its knowledge of the Ideas. Plato while regarding either line of proof—that from self-motion or that from knowledge—as valid, yet seems to have the impression that both are necessary. At the same time he can only add the one to the other, without establishing any real connexion between them. In fact the different proofs indicate that the word 'immortal' is used in two senses quite distinct from one another—although perhaps not definitely distinguished by Plato himself. As principle of life and motion soul takes its place—the supreme place, it is true—among the elements of the world of generation (*Laws*, 892). It is cognate with—while "in origin and excellence older than"—body (*Tim.*, 34 E). Accordingly the only immortality which self-motion proves is that of indestructibility or continued existence in time ; and this—or something very like it—must be allowed to pertain to body as well as to soul. That which originates motion and that in which motion is originated must always co-exist. The difference is that soul never changes from itself (*οὐκ ἀπολεῖπον ἑαυτό*, *Phædr.*, 245) : each soul retains its identity throughout its various manifestations, is the same part of the world-soul (*cf. Repub.*, 611 A, "the souls that exist must always be the same [in number]"). The combination of soul and body is broken up at

death ; but the soul can never be separated from itself. Soul in general and souls in particular alike abide. Whereas while the generation of bodies never ceases, while body in general —or, as Aristotle would say, the 'form' of body—may thus be said to have immortality, it is the nature of particular bodies to perish, to be transmuted : they are in this reference mortal. Hence it is that the defilements of and additions to soul which arise when it enters the mortal frame are described as the "mortal soul," inasmuch as they share the fate of the body when at death the immortal soul is separated from it.

It is evident then that immortality in the sense of continued existence was conceived by Plato to appertain to *νοῦς* alone. Yet it is equally evident that such immortality was regarded by him as both 'individual' and 'personal'. For he considered *νοῦς* to be the principle of personality, the essential self. In the *Laws* (959, and *cf.* 904 B) he countenances the belief that "that which makes each one of us to be what we are is only the soul," and it was his unwavering conviction that that which makes the soul to be what it is is only *νοῦς*, the principle of reason. What individual characteristics souls may retain when at the death of the body they are bereft of every feature that is contingent upon the conjunction of soul and body, Plato does not specify. All that we can legitimately infer is that souls would differ from one another according to the respective degrees of development to which—as instances of *νοῦς*—they had attained while inhabiting the body.

The other kind of immortality—that to which the soul approximates in virtue of its kinship with the Ideas—is qualitative rather than durational. The existence of the Ideas is eternal, *i.e.* timeless and self-explanatory. To this the human soul can never completely attain : soul and body as indestructible have an immortality in time, but it is distinctly stated that they are "not eternal" (*Laws*, 904), as their nature is never entirely and absolutely at one with reason. Still, the more the soul, by exercising her rational cognitive function upon the Ideas, brings herself into harmony with them the more nearly does she become immortal in this higher sense. "He whose heart has been set on the love of learning and on true wisdom, and has chiefly exercised this part of himself, this man must without fail have thoughts that are immortal and divine, if he lay hold upon truth ; and so far as it lies in human nature to possess immortality he lacks nothing thereof" (*Tim.*, 90, *cf. Sympos.*, 212 A). The soul shares in timelessness in proportion as

she lives the life of reason as opposed to that of mere unexamined impulse. Her soulhood can at no time be either increased or diminished—it is the nature of all souls to be equally and perpetually souls—*life* is with her a constant (*Phædo*, 93 A-94 B); but she can "change the place of her life," the plane of her existence, according to that with which she has κοινωνία (*Laws*, 904, E): and upon this depends the degree of her approximation to true eternity.

Clearly this abstract Spinozistic view of the mind's eternity does not of itself involve the hypothesis of pre-existence. Strictly held, indeed, it precludes durational concepts altogether. If the Ideas are conceived of as essentially non-temporal existences then the kind of existence to which the soul can lay claim in virtue of its affinity with them must likewise be regarded as non-temporal, not subject to conditions of continuance in time, having neither past nor future. But it is to be remembered that while the soul is 'akin to' the Ideas its nature is never completely identified with theirs. It cannot attain but only approximate to their eternity; and such approximation it achieves *pari passu* with and by means of its knowledge of them. So, then, the soul's immortality rests upon the same conditions as those under which its knowledge of the Ideas is gained, conditions which Plato unequivocally represents as temporal. Thus his ultimate conception of immortality is to be regarded neither as exclusively durational nor as exclusively qualitative. Mere duration, as we have seen, the soul shares with the body. On the other hand, for the soul to have precisely the same kind of eternity as that which is attributed to the Ideas would be for it to forfeit its distinctive character of life. Hence Plato lays emphasis both on the endless prolongation of the soul's existence and on its quality, kind, or grade. He conceives of immortality as a life, a life of perpetual approximation towards Ideal 'eternity' or rationality, a life that is wrought out under temporal conditions while it progressively transcends them.

The soul's affinity to the Ideas was the basal condition apart from which any intercourse between it and them such as is involved in knowledge would have been impossible. But this affinity, while thus necessarily presupposed, did not in itself contain the explanation of how knowledge comes about. For knowledge was regarded by Plato as a process, requiring further explanation than any that could be given merely from the side of its objects. And, although he held that the soul might be prepared for its contemplation of the Ideas by exercising itself about the things of sense in which

they were imperfectly envisaged, yet he recognised that, for the actual transition from perception to true knowledge, the conditions must needs be other than sensuous. In order, then, to explain how the soul comes to know the Ideas ere yet it has escaped from its imprisonment in the body, he had recourse to the hypothesis that it knew them in a previous existence, before it became subject to that imprisonment. It is clear, however, that this hypothesis merely puts the difficulty a stage farther back chronologically, while from the logical standpoint it is rather a complication than a solution. The process of knowledge remains as mysterious as ever, no matter at what period of the soul's existence it is conceived of as taking place. And, if we suppose that in this life knowledge comes about by recollection, we are just as much in the dark as to the nature of recollection itself. Thus the doctrine of recollection or reminiscence, together with that of pre-existence which is involved in it, must be taken as indicating that, even with the aid of his far-reaching conception of the soul, Plato found it impossible to explain knowledge so long as he supposed that its objects were entirely different in nature from those of sense-perception.

The truth to which the various aspects of Plato's theory of knowledge seem to point, but which he does not appear to have grasped completely, is that of the unity of nature throughout all existences and all processes whether psychical or physical. It is this truth that receives partial expression in his insistence on the affinity between the soul and the Ideas and that may be supposed to underlie his—somewhat hazy—conception of the world-soul as the source at once of human souls and of their objects. Although Plato does not explicitly say so, yet there is nothing in his language that need prevent us from supposing that he would have been ready to regard the Ideas—metaphorically at least—as the thoughts of the world-soul, the results of its intellection. Had he done so, then, since he regarded the world-soul as the active informing principle of the entire universe and human souls as akin to it, he could have inferred that knowledge has its origin in the nature of souls, is a development of possibilities that are innate in them, and further that perception itself is but imperfectly developed knowledge. But such a view could only be worked out by one who like Aristotle had reached the idea of evolution. Some such view as this it is, doubtless, that causes the modern mind to find spatial metaphors more adequate than those of time for describing the nature of knowing. Thus when we make allusion to some one who excels in knowledge we speak of

the 'depth' and 'penetration' of his intellect. Or, if we do employ temporal categories with regard to those indications which Plato was attempting to interpret, we incline to think that their reference is to the future rather than to the past. What for Plato seemed to be recollections we speak of as premonitions: the inspired soul of to-day is prophetic rather than retrospective.

V.—SYMBOLIC REASONING (VII.).[1]

By Hugh MacColl.

Syllogistic Validity.

1. The validity tests of the traditional logic turn mainly upon the question whether or not a syllogistic "term" (*i.e.*, *class* X, Y or Z) is "distributed" or "undistributed". In ordinary language these words rarely, if ever, lead to any ambiguity or confusion of thought; but logicians have somehow managed to work them into a perplexing tangle. In the proposition "All X is Y," the class X is said to be "distributed," and the class Y "undistributed". In the proposition "No X is Y," the class X and the class Y are said to be both "distributed". In the proposition "Some X is Y," the class X and the class Y are said to be both "undistributed". Finally, in the proposition "Some X is not Y," the class X is said to be "undistributed" and the class Y "distributed".

2. Let us examine some consequences of this tangle of technicalities. Take the leading syllogism Barbara, the validity of which no one will question, provided it be expressed in its *conditional* form, namely, "*If* all Y is Z and all X is Y, then all X is Z". Being admittedly valid, this syllogism must hold good whatever values (or meanings) we give to its constituents X, Y, Z. It must therefore hold good (as every logician will surely admit) when X, Y and Z are synonyms, and therefore all denote *the same class*. In this case also the two premisses and the conclusion will be three truisms which no one would dream of denying. Consider now one of these truisms, say "All X is Y". Here, by the usual logical convention, the class X is said to be "distributed," and the class Y "undistributed". But when X and Y are synonyms, they denote the *same class*, so that the same class may, at the same time and in the same proposition, be both "*dis*tributed" and "*un*distributed". Does not this sound like a contradiction? Speaking of a certain

[1] For VI., see Mind, January, 1905.

concrete collection of apples in a certain concrete basket, can we consistently and in the same breath assert that "All the apples are already *distributed*" and that "All the apples are still *undistributed*"? Do we get out of the dilemma and secure consistency if on every apple in the basket we stick a ticket X and also a ticket Y? Can we then consistently assert that all the X apples are *distributed*, but that all the Y apples are *undistributed*? Clearly not, for every X apple is also a Y apple, and every Y apple an X apple. In ordinary language the classes which we can respectively qualify as *distributed* and *undistributed* are mutually exclusive; in the logic of our text-books this is evidently not the case. Students of the traditional logic should therefore disabuse their minds of the idea that the words "distributed" and "undistributed" of their text-books necessarily refer to classes mutually exclusive, as they do in everyday speech; or that there is anything but a forced and fanciful connexion between the "distributed" and "undistributed" of current English and the technical "distributed" and "undistributed" of logicians.

3. To make the traditional logic symmetrical, as well as more widely applicable, we must extend our *Symbolic Universe*, or 'Universe of Discourse,' so as to include not only the three syllogistic classes X, Y, Z, but also their *complementary* classes 'X, 'Y, 'Z (see my preceding paper); these being so related to the former that if we take any class X and its complement 'X, the two are, on the one hand, mutually exclusive, and, on the other, make up together the whole symbolic universe S. That is to say, all the m individuals X_1, X_2, X_3, etc., of the class X, together with the n individuals $'X_1$, $'X_2$, $'X_3$, etc., of the class 'X, make up the $m + n$ individuals S_1, S_2, S_3, etc., which constitute the whole symbolic universe S. The same thing may, of course, be said of any other two complementary classes Y and 'Y. It is evident that if any two positive classes X and Y are mutually exclusive, the complementary negative classes 'X and 'Y overlap; and, *vice versâ*, if 'X and 'Y are mutually exclusive, X and Y overlap. With this convention it follows that if S be any individual taken at random out of our Symbolic Universe (or Universe of Discourse) S_1, S_2, S_3, etc., neither the statement S^X nor the statement $S^{'X}$ is impossible, and neither of them is a certainty; that is to say, we shall always have x^θ and $(x')^\theta$, and never x^η nor x^ϵ, where x means S^X and x' means $S^{'X}$ or its synonym S^{-X}. In other words, simplicity, logical consistency, and unrestricted generality require the convention that the recognition of any class A in our *Symbolic Universe* necessitates also the recognition in

it of the complementary class 'A; each forming a portion only, and both constituting the whole.

4. With these conventions we shall always have

(1) All X is Y = $(xy')^{\eta}$; (2) No X is Y = $(xy)^{\eta}$;

(3) Some X is Y = $(xy)^{-\eta}$; (4) Some X is not Y = $(xy')^{-\eta}$.

When, in any of these four propositions, a letter x or y is affected by *one* negation (only) or by *three* negations, the class (X or Y) to which it refers is said (in text-book language) to be "distributed"; but if it is affected by *two* negations (only), it is said to be "undistributed". Let the symbol X^d assert that X is (in the text-book sense) "distributed," while X^u asserts that X is "undistributed". In (1) we have $X^d\ Y^u$; for here x is affected by *one* negation only, namely, the exponent or predicate η outside the bracket, while y is affected by *two* negations, namely, the exponent η outside the bracket and the accent of denial inside the bracket. In (2) we have evidently $X^d\ Y^d$. In (3) we have $X^u\ Y^u$; for here each letter is affected by *two* negations (only), namely, the negation η and the *minus* sign preceding it. In (4) we have $X^u\ Y^d$; for here x is affected by *two* negations (only), namely, the negation η and the *minus* sign preceding it; while y is affected by *three* negations, namely, the negation η, the *minus* sign, and the accent inside the bracket. Thus *one* and *three* negations indicate a class "distributed"; while *two* indicates a class "*undistributed*". Evidently X^d implies $('X)^u$, and X^u implies $('X)^d$.

5. If we change y into x in proposition (1) of § 4, we get

All X is X = $(xx')^{\eta}$.

Here we have $X^d\ X^u$. This shows that there is no necessary antagonism between X^d and X^u; that (in the text-book sense) the same class may be both "distributed" and "undistributed" at the same time.

6. Instead of the six customary canons of the traditional logic, some of which are not quite reliable, and others not quite self-consistent, I propose the following methods of testing the validity of syllogisms:—

Let *unaccented* capitals denote *implications*, and let *accented* capitals denote *non-implications* (or the denials of implications). Thus, if A denote the implication $x : y$, then A′ will denote its denial, the non-implication $(x : y)'$. Let A, B, C denote any syllogistic implications, while A′, B′, C′ denote their respective denials. Every valid syllogism in *general* logic (with *unrestricted* values of x, y, z), and every valid syllogism of the *traditional* logic, except Darapti, Felapton, Fesapo and Bramantip, must have one or other of the two forms

(1) AB : C, (2) AB′ : C′.

That is to say, either the two premisses and the conclusion are all three implications (or "universals"), as in (1); or else one premiss only and the conclusion are both non-implications. If, in *general* logic, any syllogism fails to comply with one or other of these two forms, it can only be valid conditionally; that is to say, it will not be a formal certainty for all values ϵ or η or θ of x, y, z. The second form may be reduced to the first form by transposing the premiss B′ and the conclusion C′, and changing their signs; for $AB' : C'$ is equivalent to $AC : B$. When thus transformed, the validity of $AB' : C'$, that is of $AC : B$, may be tested in the same way as the validity of $AB : C$. The test is easy. Suppose the conclusion C to be $x : z$, in which z may be affirmative or negative. If, for example, z = *He is a soldier;* then z' = *He is not a soldier.* But if z = *He is not a soldier;* then z' = *He is a soldier.* The conclusion C being, by hypothesis, $x : z$, the syllogism $AB : C$, if valid, becomes either

$$(x : y : z) : (x : z)$$

or else

$$(x : y' : z) : (x : z),$$

in which y refers to the class Y (or "middle term") not mentioned in the conclusion $x : z$.

7. To take a concrete example, let it be required to test the validity of

$$(y : z')\ (y : x')' : (x : z)'.$$

Let Q denote this syllogism. Transposing the non-implications, we get

$$\begin{aligned} Q &= (y : z')\ (x : z) : (y : x'), \\ &= (y : z')\ (z' : x') : (y : x'), \\ &= (y : z' : x') : (y : x'). \end{aligned}$$

Thus, Q satisfies the necessary condition of validity as laid down in § 6. It is therefore valid both in *general* logic and in the *traditional* logic.

8. As an instance of a *non-valid* syllogism of the form $AB : C$, we may give

$$(x : y')\ (y : z') : (x : z');$$

for since the y's in the two premisses have *different signs*, the one being negative and the other affirmative, the combined premisses can neither take the form $x : y : z'$ nor the form $x : y' : z'$, which are respective abbreviations for $(x : y)\ (y : z')$ and $(x : y')\ (y' : z')$. The syllogism is therefore not valid.

9. Syllogisms of the form $AB : C'$ include *Darapti*, *Felapton*, *Fesapo* and *Bramantip*. In *general* logic these are not formal certainties, and are therefore only valid conditionally. With the conventions of § 3, however, the required conditions sometimes hold good in the traditional logic. The following is a

valid syllogism, though the traditional logic would not recognise it as valid because it violates the canon that "the middle term must be distributed at least once in the premisses" :—

If all who approve of *Protection* are *Conservatives*, and all who approve of fiscal *Retaliation* are also *Conservatives;* then somebody (one person at least) who does not approve of fiscal *Retaliation* does not approve of *Protection.*

Speaking of an individual taken at random from our 'Universe of Discourse,' let P = "He approves of *Protection*"; let C = "He is a *Conservative*"; and let R = "He approves of fiscal *Retaliation*". Then, for our two premisses we have $(P : C)(R : C)$, and for our conclusion $(R' : P)'$. Thus, putting ϕ for the whole syllogism, we have

$$\phi = (P : C)(R : C) : (R' : P)',$$

which may be read "If P implies C, and R also implies C; then R′ does not imply P". In other words, the conclusion asserts that "One may disapprove of fiscal *Retaliation* without approving of *Protection*".

Now, let us first consider the formula ϕ from the standpoint of *general* logic, in which the symbols P, C, R may denote any statements whatever, possible or impossible. By a general method (which it would take too long here to explain) for testing the validity of formulæ, it may be shown that the formula ϕ fails in the case $C^{\epsilon}(R + P)^{\epsilon}$. The failure may be easily verified as follows. We have

$$\phi = (P + R : C) : (R'P')^{-\eta}$$
$$= (R + P : C) : (R + P)^{-\epsilon}.$$

Now, suppose $C = \epsilon_1$ and $R + P = \epsilon_2$. We get (see preceding paper)

$$\phi = (\epsilon_2 : \epsilon_1) : \epsilon_2^{-\epsilon} = \epsilon_3 : \epsilon_2^{-\epsilon} = \epsilon_3 : \eta_1 = \eta_2.$$

This shows that in *general* logic ϕ fails in the case $C^{\epsilon}(R+P)^{\epsilon}$. Let ϕ_1 now denote the general syllogism ϕ when restricted to the *concrete* example about "conservatives," "retaliation," "protection". The failure of the general formula ϕ, with *unrestricted* values of C, R, P, does not necessarily involve the failure of ϕ_1, in which the values (or meanings) of the statements C, R, P are *restricted* by the condition $C^{\theta}R^{\theta}P^{\theta}$ (see § 3). The *restriction* C^{θ} of the *traditional* logic is inconsistent with the factor C^{ϵ} in the failure case of *general* logic. Thus we have $\phi^{-\epsilon}\phi_1^{\epsilon}$, which asserts that the particular formula ϕ_1 is valid though the general formula ϕ (with unrestricted values of C, R, P) is not. To assert that the concrete syllogism ϕ_1 fails in the case $C^{\epsilon}(R + P)^{\epsilon}$ would be to assert that it fails on the supposition that *everybody* is a *Conservative*, and that also *everybody* is either a *Retaliationist*

or a *Protectionist*. This supposition is not only contrary to fact, but, by the convention of § 3, it cannot even *arise* in the traditional logic, since the existence of C (conservatives) in our 'Universe of Discourse' necessarily implies the existence (the *symbolic* existence) also of 'C (non-conservatives) in the same universe, even if the latter should be mere "men of straw".

10. The syllogism discussed in § 9 may also be expressed in the form

$$(\mathrm{PC}')^{\eta}(\mathrm{RC}')^{\eta} : (\mathrm{R}'\mathrm{P}')^{-\eta}.$$

Let $\mathrm{C}' = y$, let $\mathrm{P} = z'$, and let $\mathrm{R} = x'$. It then becomes

$$(yz')^{\eta}(yx')^{\eta} : (xz)^{-\eta}$$

which is equivalent to

$$(y : z)(y : x) : (x : z')',$$

and may be read "If all *non-conservatives* (Y) are *non-protectionists* (Z), and all *non-conservatives* (Y) are also *non-retaliationists* (X); then some *non-retaliationist* (one at least) is a *non-protectionist*. In this form it becomes a valid syllogism of the type Darapti, with the "middle term" no longer "undistributed". Yet the two syllogisms are necessarily equivalent since $\alpha : \beta$ is always equivalent to $\beta' : \alpha'$; so that the canon about "middle term" distribution refuses admittance to a syllogism when it presents itself under one form, but lets it pass as valid when it disguises itself under another.

11. Consider the syllogism "If all *non-existences* are *fictitious*, and all *non-existences* are represented by the symbol *zero*; then some *fictitious* things (or thing) are represented by the symbol *zero*".

Speaking of something S taken at random out of our Symbolic Universe, or Universe of Discourse, let the symbol 0 denote the statement "It is *non-existent*"; let f denote "It is *fictitious*"; and let z denote "It is represented by the symbol *zero*". Putting ϕ for the syllogism, we have

$$\begin{aligned}\phi &= (0 : f)(0 : z) : (f : z')' \\ &= (0 : fz) : (fz : \eta)'.\end{aligned}$$

Now, since the Symbolic Universe contains both real existences (e) and non-existences (0), the statement 0 (which is short for S^0) is not impossible, so that $0^{-\eta}$, or its synonym $(0 : \eta)'$, is always understood among our data, and may be expressed whenever convenient. Hence, we get

$$\begin{aligned}\phi &= (0 : fz)(0 : \eta)' : (fz : \eta)' \\ &= (0 : fz)(fz : \eta) : (0 : \eta), \text{ by transposing.}\end{aligned}$$

Thus, the syllogism ϕ, like all valid syllogisms, comes ultimately under the formula $(\alpha : \beta)(\beta : \gamma) : (\alpha : \gamma)$, and is therefore a formal certainty.

12. Next, take the syllogism "If no *centaurs* are really

existent, and no *fairies* are really *existent*; then some things (or thing) that are not *centaurs* are not *fairies*".

This syllogism is perfectly valid, though, in the above form, it violates the traditional canon that no conclusion can be drawn from negative premisses.

Speaking of an entity S taken at random out of our Symbolic Universe, let c = "It is a *centaur*"; let e = "It *exists* really"; and let f = "It is a *fairy*". Also let ϕ denote the syllogism. We have

$$\begin{aligned}\phi &= (c : e')\ (f : e') : (c' : f)' = (e : c')\ (e : f') : (c' : f)' \\ &= (e : c'f') : (c'f' : \eta)' = (e : c'f')\ (e : \eta)' : (c'f' : \eta)' \\ &= (e : c'f')\ (c'f' : \eta) : (e : \eta) \text{ by transposition};\end{aligned}$$

so that here also ϕ is a formal certainty, as it is a particular case of the formula $(\alpha : \beta)\ (\beta : \gamma) : (\alpha : \gamma)$. The factor $(e : \eta)'$, which we introduced in the last complex implication but one, is, of course, understood throughout; as, by our convention of a 'Symbolic Universe,' the statement e (which is short for S^e) is not impossible, just as its denial, the statement e', or its synonym 0 or S^0, is not impossible. For our convention (see § 3) implies both e^θ and 0^θ, which respectively imply $e^{-\eta}$ and $0^{-\eta}$, these last being synonymous with $(e : \eta)'$ and $(0 : \eta)'$.

13. The three common-sense canons of the traditional logic, (1) that "All X is Y" implies "Some X is Y," (2) that "No X is Y" implies "Some X is not Y," and (3) that "All X is Y" and "No X is Y" are incompatible have been (somewhat paradoxically) called in question by some logicians; but on the assumption of a Symbolic Universe, including, when needed, both the real existences e_1, e_2, e_3, etc., and the non-existences or unrealities 0_1, 0_2, 0_3, etc., they can be formally proved as follows:—

Speaking of an entity S, taken at random out of our Symbolic Universe, S_1, S_2, S_3, etc., let x and y respectively denote the two statements, "It belongs to the class X" and "It belongs to the class Y". Let ϕ_1, ϕ_2, ϕ_3 denote the three canons respectively. We have

$$\begin{aligned}\phi_1 &= (x : y) : (x : y')' = (xy')^\eta : (xy)^{-\eta} = (xy')^\eta\ (xy)^\eta : \eta \\ &= (xy' : \eta)\ (xy : \eta) : \eta = (xy' + xy : \eta) : \eta \\ &= \{x(y' + y) : \eta\} : \eta = (x\epsilon : \eta) : \eta = (x : \eta) : \eta \\ &= (\theta : \eta) : \eta = \eta : \eta = \epsilon.\end{aligned}$$

This proof is, of course, far fuller than is necessary, and I only give it thus in all its details to show how the same statement may sometimes be presented under different forms. The canon ϕ_2 may be proved similarly by merely interchanging y and y'. To prove ϕ_3, we have

$$\phi_3 = (x : y)\ (x : y') : \eta = (xy')^\eta\ (xy)^\eta : \eta,$$

which (as already shown) is equivalent to ϕ_1.

14. As already explained, my symbolic system assumes that any class A may be divided into individuals, or mutually exclusive divisions, A_1, A_2, A_3, etc. This convention may, when convenient or necessary, be carried farther. Any of these divisions, say A_8, may again be subdivided into $(A_8)_1$, $(A_8)_2$, $(A_8)_3$, etc.; which, to avoid brackets, may be denoted respectively by $A_{8\cdot1}$, $A_{8\cdot2}$, $A_{8\cdot3}$, etc. And these again may be subdivided, so that, taking any subdivision $A_{8\cdot3}$, we may have $A_{8\cdot3\cdot1}$, $A_{8\cdot3\cdot2}$, $A_{8\cdot3\cdot3}$, etc., *ad libitum*.

15. The convention that the symbol of non-existence 0 should be treated as a class symbol just like others, and that this supposed indivisible atom of symbolic logic may after all be broken up into individuals or elements 0_1, 0_2, 0_3, etc., like any other class symbol, appears to have caused as much astonishment as the modern discovery (or convention?) that the physical atom may be broken up into electrons. But the convention will help us to get rid of some too hastily accepted paradoxes, not only in logic but also in mathematics, in metaphysics, and even in physics. We are all more or less subject to a certain mental disorder which, for want of a better name, I may call *symbolatry*. We mistake the symbol for the reality. We worship the formulæ of our own invention as if they were living oracles whose infallibility it would be impious to call in question. Yet all formulæ, being founded more or less on arbitrary conventions or definitions, must necessarily have their limits of applicability. When we force them beyond those limits, as we too often do, they evolve strange paradoxes, which some eminent logicians and mathematicians accept with surprising readiness, born of over-confidence in symbolic reasoning, but which the plain man of common sense stubbornly refuses to believe. Having myself been a victim more than once to symbolic hallucination, I have now become thoroughly sceptical. When rigorous symbolic reasoning brings me face to face with a startling paradox, I carefully scrutinise the fundamental assumptions, including definitions and conventions, in search of some lurking ambiguity; and, in nine cases out of ten, the search is successful. That is why I cannot accept some of the paradoxes of the non-Euclidean geometry, such as that "two straight lines may enclose a space," and that "a point moving always in a straight line and in the same direction may, finally, after an infinitely long journey, find itself at the point of starting". The path of the moving point may be "straight" *symbolically*, but it can hardly be so *really*.

VI.—DISCUSSION.

THE EXISTENTIAL IMPORT OF PROPOSITIONS.

Mr. MacColl's interesting paper in the January number of Mind, together with his note in the April number, raises certain points which call for an answer from those who (like myself) adhere to the usual standpoint of symbolic logicians on the subject of the existential import of propositions.

The first point in regard to which clearness is essential concerns the meaning of the word "existence". There are two meanings of this word, as distinct as stocks in a flower-garden and stocks on the Stock Exchange, which yet are continually being confused, or at least supposed somehow connected. Of these meanings, only one occurs in philosophy or in common parlance, and only the other occurs in mathematics or in symbolic logic. Until it is realised that they have absolutely nothing to do with each other, it is quite impossible to have clear ideas on our present topic.

(*a*) The meaning of *existence* which occurs in philosophy and in daily life is the meaning which can be predicated of an individual, the meaning in which we inquire whether God exists, in which we affirm that Socrates existed, and deny that Hamlet existed. The entities dealt with in mathematics do not exist in this sense: the number 2, or the principle of the syllogism, or multiplication, are objects which mathematics considers, but which certainly form no part of the world of existent things. This sense of existence lies wholly outside Symbolic Logic, which does not care a pin whether its entities exist in this sense or not.

(*b*) The sense in which existence is used in symbolic logic is a definable and purely technical sense, namely this: To say that A exists means that A is a class which has at least one member. Thus whatever is not a class (*e.g.*, Socrates) does not exist in this sense; and among classes there is just one which does not exist, namely, the class having no members, which is called the null-class. In this sense, the class of numbers (*e.g.*) exists, because 1, 2, 3, etc., are members of it; but in sense (*a*) the class and its members alike do not exist: they do not stand out in a part of space and time, nor do they have that kind of super-sensible existence which is attributed to the Deity.

It may be asked: How come two such diverse notions to be confounded? It is easy to see how the confusion arises, by considering classes which, if they have members at all, must have

members that exist in sense (*a*). Suppose we say: "No chimeras exist". We may mean that the class of chimeras has no members, *i.e.*, does not exist in sense (*b*), or that nothing that exists in sense (*a*) is a chimera. These two are equivalent in the present instance, because if there were chimeras, they would be entities of the kind that exist in sense (*a*). But if we say "no numbers exist," our statement is true in sense (*a*) and false in sense (*b*). It is true that nothing that exists in sense (*a*) is a number; it is false that the class of numbers has no members. Thus the confusion arises from undue preoccupation with the things that exist in sense (*a*), which is a bad habit engendered by practical interests.

Mr. MacColl assumes (p. 74) two universes, the one composed of existences, the other of non-existences. It will be seen that, if the above discrimination is accepted, these two universes are not to be distinguished in symbolic logic. All entities, whether they exist or whether they do not (in sense (*a*)), are alike real to symbolic logic and mathematics. In sense (*b*), which is alone relevant, there is among classes not a multitude of non-existences, but just one, namely, the null-class. All the members of every class are among realities,[1] in the only sense in which symbolic logic is concerned with realities.

But it is natural to inquire what we are going to say about Mr. MacColl's classes of unrealities, centaurs, round squares, etc. Concerning all these we shall say simply that they are classes which have no members, so that each of them is identical with the null-class. There are no Centaurs; 'x is a Centaur' is false whatever value we give to x, even when we include values which do not exist in sense (*a*), such as numbers, propositions, etc. Similarly, there are no round squares. The case of nectar and ambrosia is more difficult, since these seem to be individuals, not classes. But here we must presuppose definitions of nectar and ambrosia: they are substances having such and such properties, which, as a matter of fact, no substances do have. We have thus merely a defining concept for each, without any entity to which the concept applies. In this case, the concept is an entity, but it does not denote anything. To take a simpler case: "The present King of England" is a complex concept denoting an individual; "the present King of France" is a similar complex concept denoting nothing. The phrase intends to point out an individual, but fails to do so: it does not point out an unreal individual, but no individual at all. The same explanation applies to mythical personages, Apollo, Priam, etc. These words have a *meaning*, which can be found by looking them up in a classical dictionary; but they have not a *denotation:* there is no entity, real or imaginary, which they point out.

[1] This holds even of the null-class. Of all the members of the null-class, *every* statement holds, since the null-class has no members of which it does not hold. See below, on the interpretation of the universal affirmative A.

It will now be plain, I hope, that the ordinary view of symbolic logicians as to existential import does not require Mr. MacColl's modifications. This view is, that A and E do not imply the existence, in sense (*b*), of their subjects, but that I and O do imply the existence, in sense (*b*), of their subjects. No one of the four implies the existence, in sense (*a*), either of its subject or of any of the members of its subject. We have, adopting Peano's interpretation:—

A. All S is P = For all values of x, 'x is an S' implies 'x is a P'.

E. No S is P = For all values of x, 'x is an S' implies 'x is not a P'.

I. Some S is P = For at least one value of x, 'x is an S' and 'x is a P' are both true.

O. Some S is not P = For at least one value of x, 'x is an S' and 'x is not a P' are both true.

Thus I and O require that there should be at least one value of x for which x is an S, *i.e.*, that S should exist in sense (*b*). I also requires that P should exist, and O requires that not-P should exist. But A and E do not require the existence of either S or P; for a hypothetical is true whenever its hypothesis is false,[1] so that if 'x is an S' is always false, 'All S is P' and 'No S is P' will both be true whatever P may be.

The above remarks serve to answer the objection raised by Mr. MacColl in the April number of MIND (p. 295) to the equation $0A = 0$. To begin with, 0 does not represent the class of non-existences, but the non-existent class, *i.e.*, the class which has no members. Thus, if "$XA = X$" means "every X is an A,"[2] then "$0A = 0$" means "every member of the class which has no members is an A," or "for every value of x, 'x is a member of the class which has no members' implies 'x is an A'". This hypothetical is true for all values of x, because its hypothesis is false for all values of x, and a hypothetical with a false hypothesis is true. Thus Mr. MacColl's objection rests upon his taking 0 to be the class of non existences, presumably in sense (*a*), since only so would 0 be a class with many members, all of them unreal, as he supposes it to be. The true interpretation of 0, as the non-existent class, in sense (*b*), at once disposes of the difficulty.

The same principles solve Lewis Carroll's paradox, noticed by "W" in the April number of MIND (p. 293). I cannot agree with "W" in regarding the paradox as merely verbal; on the contrary, I consider it a good illustration of the principle that a false proposition implies every proposition. Putting p for 'Carr is out,' q for 'Allen is out,' and r for 'Brown is out,' Lewis Carroll's two hypotheticals are:—

(1) q implies r.
(2) p implies that q implies not-r.

[1] See my *Principles of Mathematics*, vol. i., p. 18.
[2] Not "every X is A," as Mr. MacColl says, and as most logicians say.

Lewis Carroll supposes that 'q implies r' and 'q implies not-r' are inconsistent, and hence infers that p must be false. But as a matter of fact, 'q implies r' and 'q implies not-r' must both be true if q is false, and are by no means inconsistent. The contradictory of 'q implies r' is 'q does not imply r,' which is not a consequence of 'q implies not-r'. Thus the only inference from Lewis Carroll's premisses (1) and (2) is that if p is true, q is false, *i.e.*, if Carr is out, Allen is in. This is the complete solution of the paradox.

B. Russell.

Mr. Russell has very kindly and courteously sent me a proof of the above, so that logicians might, in the same number of Mind, have an opportunity of reading his criticism side by side with any comments I might desire to make. My comments shall be brief. With much of what Mr. Russell says in his able and interesting dissection of the question at issue I agree; but not with all. That the word *existence*, like many others, has various meanings is quite true; but I cannot admit that any of these "lies wholly outside Symbolic Logic". Symbolic Logic has a right to occupy itself with any question whatever on which it can throw any light. As regards Existential Import, the one important point on which I appear to differ from all other symbolists is the following. The null class o, which they define as containing no members, and which I, for convenience of symbolic operations, define as consisting of the null or unreal members o_1, o_2, o_3, etc., is understood by them to be *contained in every class*, real or unreal; whereas I consider it to be *excluded from every real class*. Their convention of universal inclusion leads to awkward and, I think, needless paradoxes, as, for example, that "Every round square is a triangle," because round squares form a *null* class, which, by them, is understood to be *contained in every class*. My convention leads, in this case, to the directly opposite conclusion, namely, that "No round square is a triangle," because I hold that every purely *unreal* class, such as the class of round squares, is necessarily excluded from every purely *real* class, such as the class of figures called triangles.

I may mention, as a fact not wholly irrelevant, that it was in the actual application of my symbolic system to concrete problems that I found it absolutely necessary to label realities and unrealities by special symbols e and o, and to break up the latter class into separate individuals, o_1, o_2, o_3, etc., just as I break up the former into separate individuals, e_1, e_2, e_3, etc. It is a vital principle in the evolution of any effective symbolic system that we should modify, and, whenever possible, simplify our notation, in order to adapt it to the varying needs of different classes of problems. It is this elastic adaptability to circumstances—this readiness to change the meaning of any symbol (not excepting *zero*), and even of any conventional arrangement of symbols, whenever it suits the purpose of the investigation—that enables my symbolic system to solve

certain classes of problems (especially in mathematics) which lie entirely beyond the reach of any other symbolic system within my knowledge. In saying this I do not mean in any way to suggest that other symbolic systems may not have the advantage over mine in regard to other classes of problems which I have never studied. Mr. Russell's system in particular seems to be specially constructed to deal with problems which lie altogether out of the line of my researches. Different kinds of work require different kinds of instruments.

The following arrived too late to be added to the article on "Symbolic Reasoning":—

[My statement in § 3 (of "Symbolic Reasoning"), that "if any two classes X and Y are mutually exclusive, the complementary classes 'X and 'Y overlap," requires qualification. I should have said "if any two *non-complementary* classes, etc.". This I discovered symbolically as follows; though, of course, it may be proved more briefly. Let ϕ denote the *unqualified* statement. We get

$$\phi = (xy)^{\eta} : (x'y')^{-\eta} = (xy)^{\eta}\,(x'y')^{\eta} : \eta$$
$$= (x : y')\,(y' : x) : \eta = (x = y') : \eta = (x = y')^{\eta}.$$

Thus, ϕ is equivalent to the statement that *the class* X *cannot be the complement of the class* Y, a statement which only holds good when X and Y are understood throughout to be *non-complementary*.]

HUGH MACCOLL.

VII.—CRITICAL NOTICES.

The Evolution of Theology in the Greek Philosophers. The Gifford Lectures delivered in the University of Glasgow in Sessions 1900-1 and 1901-2. By Edward Caird, LL.D., D.C.L., D.Litt., etc., Master of Balliol College, Oxford. Two vols. Glasgow: James Maclehose & Sons, 1904. Pp. ix., 382 and 377.

The Master of Balliol possesses the unique distinction of having twice held the office of Gifford Lecturer in a Scottish University. The present work is, in a way, a sequel to the lectures delivered some years ago in the University of St. Andrews on the 'Evolution of Religion,' and deals with the first stage in the development of the 'reflective reproduction and explanation' of religion, that is, of theology or the philosophy of religion. The interest of these lectures is therefore primarily theological. But they can be regarded also as containing a fairly complete account of the progress of Greek Metaphysics and Ethics—theology being inseparably connected with these sciences and perhaps having no positive content apart from them.

The first lecture contains a statement of the relation of religion to theology as it appears to the author. Theology, we are told, is 'the conscious reaction of mind upon the results of its own unconscious or obscurely conscious movements'. 'It is the product of a time that has outgrown simple faith and begun to feel the necessity of understanding what it believes.' 'Early religion . . . is intuitive rather than reflective, practical rather than speculative, conscious rather than self-conscious.' The function of theology is 'to measure and criticise, to select and to reject, to reconsider and remould by reflexion, the immediate products' of religious experience. Further, 'in the long process of . . . history the part played by reflexion must become more and more important. . . . It is inevitable that the results of reflective criticism should enter more and more deeply into the substance of religion itself.' At the same time, however, we are told that theology cannot become a substitute for religion, 'the day will never come when, in Goethe's satirical phrase, the world shall be held together by philosophy and not by hunger and love'.

It is not easy to see that this is a clear and consistent account of the facts. In the first place, if theology is related to religion

merely as the conscious is related to the unconscious or obscurely conscious, it is difficult to see how it can ever come to criticise, to select and reject, the immediate products of religious experience. The critical attitude of theology can surely be explained only by supposing that early religion contains elements that are not strictly religious and that the process of reflexion consists in the elimination of these elements and in the restriction of religion to its own special province. In the second place, it is useless to profess to hold that 'theology is not religion,' if at the same time one maintains that reflective criticism tends 'to enter more and more deeply into the very substance of religion itself'. If the last statement is true, religion must in the long run become philosophy. Which view does Mr. Caird really hold? He uses in the present passage and elsewhere the analogy of ethics. But the analogy does not support his point. There is no conceivable sense in which it can be said that ethics tends to take the place of morality or to become more and more important relatively to actual practice. Morality is from the first to some extent conscious (as indeed Mr. Caird would admit), and there is no development of ethical theory which is not merely the reflexion of a corresponding development in moral experience. A better illustration perhaps can be got from art. The relation of the philosophy of art to art is very nearly the same as that of the philosophy of religion to religion. Would Mr. Caird maintain that æsthetics is entering more and more into the substance of art, and does he look forward to an ideal time when æsthetics shall have become a substitute for art? Most of his discussion seems to imply this view, though it is explicitly disowned in the words quoted above.

The same or similar difficulties recur when Mr. Caird proceeds, in the central part of this opening lecture, to discuss the fact of an actual *opposition* between reflective thought and religion, between reason and faith. In the concluding part of the lecture he gives a fuller exposition of his view of the relation of philosophy to religion.

Mr. Caird's account of this conflict, 'which, more than any other, has embarrassed the development of religion during the last two centuries,' is most interesting. 'On the one hand,' he explains, 'a faith which is not seeking intelligence is a faith which is stunted and perverted. . . . The attempt to defend Christianity by questioning the right of the intelligence to criticise it, is suicidal. . . . A religion that does not develop must soon die.' On the other hand, the effect of admitting the claims of science means either to abolish religion altogether or to provide a substitute which from the point of view of religion is obviously inadequate, such as the Deism or natural theology of the eighteenth century. Hence it is necessary either to abandon religion altogether or to be content with a religion that refuses to science the right to criticise it and which therefore cannot develop. As an eirenicon or solution of this dilemma, the author suggests 'the idea of Evolution'. 'That idea,' he says, 'enables us to throw some new light upon the

relations of the unconscious or unreflective to the conscious or reflective life, as stages or factors in the development of man.' 'In the very idea,' he goes on to argue, 'that they are two factors or stages of one life, it is involved that they are not governed by two absolutely antagonistic principles, but that there is an essential link of connexion between them. Their difference and opposition, however far it may reach, must ultimately be conceived as secondary and capable of being explained from their unity. . . . It is the same reason that is at work in both' (the unconscious movement of man's mind and that which is conscious and reflective).

Now it will readily be granted that, on this view, it is impossible, that there should be ultimate discord between reason and faith. If reason and faith are merely different operations of precisely the *same* reason—if they are merely different stages in *one* life—they cannot ultimately disagree. But then why should they disagree at all? The objection suggested above occurs here with special force. Both 'life' and 'reason' are words of the vaguest and widest meaning: both may contain fundamentally different types. To say that the difference and opposition between faith and reason 'however far it may reach must ultimately be conceived as secondary and capable of being explained from their unity' seems to show a mental bent towards excessive unification. Mr. Caird's solution seems to do no more than assert that there must be a solution, and supplies no definite principle for the treatment of the problem. The more obvious solution would consist in drawing a distinction between two ultimately different types of reason, theoretical and practical reason. It could then be suggested that early religion consists of a confused mixture of the two, of a strictly religious element and a non-religious element—the former falling under practical reason or being at least non-theoretical. As intelligence developed, a conflict would arise inevitably, not between 'reason' and faith, but between *science* (or theoretical reason) and faith. This opposition would be between science and the non-religious element in early religion, for obviously no *opposition* could exist between science and religion in the strict sense, as they are supposed to have completely distinct spheres. The solution would consist in distinguishing science and religion sharply, and in confining each to its proper sphere. The one sphere would be constituted by the contrariety of truth and falsity, reality and appearance; the other (if we suppose religion to fall within the sphere of practice) by the contrariety of good and bad. They would be exclusive of each other, in the sense that no proposition of fact can be inferred from a proposition of value, and *vice versa.* As long as religion is supposed to contain a metaphysical element, conflict between it and science is inevitable: and if this element is emphasised as the essence of religion, it must always be possible to provide a metaphysic which shall be a substitute for religion.

In Mr. Caird's view this distinction is not emphasised, and therefore it is difficult to see how he can avoid the charge of sub-

stituting philosophy for religion. He discusses the point in the concluding part of the first lecture. Using again the illustration of ethics, he shows that 'ethics does not, and cannot produce a morality which is essentially different from the morality of ordinary experience,' though it does contribute to moral progress. But the example of ethics is irrelevant, strictly. It is obvious that the theory of practice cannot be a substitute for practice itself, but necessarily exists for the sake of it. There can be no *opposition* between practice and the theory of it. Opposition can arise only when you have two disciplines dealing with the same sort of problem, from the same point of view.

It has been necessary to dwell at length on this question because one's interpretation of the historical development of thought depends on one's answer to it. From the one point of view, that taken by Mr. Caird, the tendency is, emphasising the teleological aspect of metaphysics, to connect metaphysics and theology as closely as possible, and to regard as a defect the supposed 'dualism' of Plato and Aristotle, which is simply the distinction of θεωρία from πρᾶξις in a special form. The tendency of the other view would be just the opposite: to insist on the non-teleological character of science and to deprecate all attempts to find a common measure for two things that are essentially incommensurable.

The tendency of Mr. Caird's way of thinking—the tendency to suppose that unity is more ultimate than difference and that the latter can be explained by the former—has been indicated in such words as those quoted above, in which he says that the difference and opposition of early religion and faith 'must ultimately be conceived as secondary and capable of being explained from their unity'. The tendency is still more clearly seen in the account he gives of the nature of religion, in the beginning of the second lecture. 'Religion,' we are told, 'is the idea of God as an absolute power and principle. . . . It is the consciousness that, beyond all the objects we perceive without us, and beyond all the states and activities of the self within us, there is a unity which manifests itself in both, and from which neither can be separated.' It is a consciousness of 'the unity of the whole. . . . To think, to feel, to will—all the power of our consciousness—are ultimately bound up with the idea of an all-comprehending whole. . . . The secular consciousness . . . starts from the division and separation of things. . . . The religious consciousness is the direct antithesis of this way of thinking.' It is impossible to see how such a unity —a unity that transcends thought, willing, feeling—could be *positively* described or apprehended, and as a matter of fact, the author in referring to it seems always to use metaphysical terms and distinctions—that is, terms and distinctions that imply the point of view of Θεωρία.

The rest of the second lecture need not detain us. In it the author distinguishes three stages in the evolution of theology. The first of these, the period of Greek and Roman antiquity, in

which thought is practically free, is the subject of the present lectures.

The third lecture deals with the precursors of Plato, who is described as in a sense the first theologian, and especially with Xenophanes, with whom the conflict of science and religion begins, Anaxagoras, who introduced in a vague way the conception of teleological explanation, and Socrates, who conceived clearly the fundamental importance of teleology in ethics, without however raising the question whether the use of it is admissible outside of that science. Too much perhaps is made of the 'religious' aspect of Xenophanes and Heraclitus: in ascribing, for instance, to the former 'the idea of God as the mere negation of the finite'. We must remember that the One of Xenophanes's successor Parmenides was finite: what Xenophanes and Heraclitus between them did was to adumbrate, in the obscurest possible way, the fact that science aims at understanding the world as an intelligible and systematic whole. In discussing Anaxagoras Mr. Caird points out that in referring the order of the universe to a rational principle 'apparently all he meant was that the world is a system capable of being understood, because the connexion of its parts is determined by definite laws, and not that, as a whole, it is a manifestation of reason, or a system in which the highest good is realised'. A distinction seems to be drawn here between two very different kinds of teleological explanation: (1) the explanation of the world as a systematic *whole,* and (2) what is a teleological explanation in the more obvious sense, of the world as the realisation of an end, as the result of conscious design. In both senses the world would be regarded as a 'manifestation of reason,' and it is in the former sense only that a teleological explanation of the world is admissible from the strictly scientific point of view.

The development of thought in the hands of Plato is expounded in the following six lectures. The doctrine of Aristotle—the outcome of that development—is explained in three lectures on practical reason, theoretical reason and the relation of the two, while the final results of the Aristotelian philosophy are summed up in a fourth.

'In the end,' we are told, 'Aristotle becomes the author of a more definite and pronounced form of dualism than that of Plato. For, though in his philosophy matter gets a more definite position, it is not after all the true correlate of form. Hence it sinks into an external something which the form needs in order to realise itself, but in which it can only realise itself imperfectly. And even this necessity seems to be denied in the case of the pure intelligence. . . . It is this view of reason which is the source of the greatest difficulty in Aristotle's psychology; it manifests itself again in his conception of morality and of the relation of the practical to the contemplative life; and, finally, it determines his idea of the nature of God and of his relation to the world.' It is easy to see that all these difficulties can be reduced to the crucial

question of the relation of theory and practice. For instance, the Aristotelian conception of matter is entirely relative to the notion of production. If we analyse the notion of production we find that it implies something that can be otherwise than it is. This is what Aristotle calls ὕλη. Again this ὕλη must of course be *external* to the agent, for there can be no such thing as self-determination in the sense of a process of change that is initiated *ab intra*. And obviously the conception of matter has no meaning when we view the world *sub specie æternitatis* from the restricted standpoint of θεωρία.

Aristotle, Mr. Caird thinks, 'has no final solution for this difficulty, but rather evades it, as the scholastics so often evaded their difficulties, by a distinction. In other words, he breaks the unity of man's life and divides it into two departments or spheres of existence, in either of which he may live and move. In both spheres, indeed, man manifests his rational nature. . . . But there is an exercise of reason in which it is determined by itself, and deals only with purely intelligible objects; and there is another exercise of reason in which it deals with a material alien to itself . . . which it can never completely assimilate.' In the sphere of practice reason by reflexion 'can attain to a kind of science, yet the results of such science must be only approximate and inexact—they can reach only generality and not universality'. 'There is an element in our consciousness which cannot be generalised, or made intelligible, in the way of science. This fact, however, does not embarrass us in the sphere of pure science; for in Aristotle's view of it, science has only to do with general principles and what can be deduced from them. In the practical life, however, it becomes important, for action has directly to do with the particular.' 'Our appetites and passions have not reason immanent in them, and must have it superinduced upon them from without by habituation,' and hence we cannot ascribe moral virtue to God. Although made from an adverse point of view, Mr. Caird's statement of Aristotle's position is admirable. A follower of Aristotle has only to accept the statement and to ask, How otherwise *can* the sphere of practice be distinguished? The point of view of πράξις and the practical good *is* just the point of view from which there is an opposition between the irrational and the rational, and therefore a practical problem of making the irrational rational, of realising an ideal. Practice so defined must consist of particular acts, and must regard the world as capable of being other than it is, a view of the world which is impossible to pure θεωρία. And clearly, if by God we mean the absolute of metaphysics, it is impossible to ascribe to God, *e.g.*, the virtue of justice. Mr. Caird is no doubt right in saying that Aristotle solves the difficulty by means of a distinction. But in describing this solution as an evasion, Mr. Caird seems to imply that no difficulty can be solved by means of a distinction—which is surely not the case. Many difficulties can be solved by means of a distinction, and that this is one of them

can be shown from the fact that any other supposed 'solution' will be found to overlook the distinction.

Mr. Caird suggests that 'Aristotle seems to come near the solution of the difficulty, when he detects in man a *βούλησις* or will of the good, that is, a desire for the satisfaction of our whole being, which is quite different from the particular passions'. 'In virtue of it, all the particular ends of passion must be sought not for themselves but *sub ratione boni*. . . . But Aristotle does not recognise this "will of the good" as the essential impulse of a rational nature. . . . When he comes to ask himself what is the nature of that act of self-determination which is implied in all moral action, he does not connect it in any special way with the will of the good, but defines it simply as a "deliberative desire".' Aristotle's view of the relation in action of the intellectual and 'orectic' elements is involved in considerable obscurity, but Mr. Caird's statement seems hardly to do justice to it. Aristotle seems to hold that *διάνοια*, intellect, as such, has to do with the true and the false, and cannot by itself effect an alteration in reality, *οὐδὲν κινεῖ*. The distinction of good and bad is not merely a different operation of *διάνοια* but implies the presence of an element that is not intellectual at all, and is possible only in the complex being man. But the distinction of Will from Thought is not just the same as the distinction of the irrational from the rational; for *ὄρεξις* can be rational—*βούλησις* is rational *ὄρεξις*. It is surely possible to describe *βούλησις* as 'the essential impulse of a rational nature'. And one would be inclined to say that when Aristotle identifies moral action with *προαίρεσις*, and defines *προαίρεσις* as *ὄρεξις διανοητική*, he does connect it with 'the will of the good,' since the *ὄρεξις* of the definition *is βούλησις*.

The thirteenth lecture (on the question, Does the primacy belong to theoretical or practical reason?) is chiefly occupied with a very interesting comparison of Aristotle and Kant. It is shown how Kant completely reverses Aristotle's view (and, if we may be allowed to say so, the truth of the matter) regarding the sphere of science as the sphere of contingency, and practical reason as giving final satisfaction. According to Mr. Caird the views of both are one-sided and abstract, and point to a religious consciousness, which (somehow) transcends and includes both. The lecture contains also some discussion of the place in science of teleological explanation. Has teleological explanation any place at all? Mr. Caird points out that 'recent times have seen a new attempt to use the conceptions of organism and organic evolution in the exploration of the phenomena of nature, and particularly, of the phenomena of the life of plants and animals'. But he admits that 'it must be allowed that the main work of science has been to follow out the lines of external connexion between phenomena, and that even in regard to the organic world, it generally pursues the same method to the same result'. We should be inclined to

say that what science actually does is more likely to be right than what philosophers think it ought to do. As to Aristotle's view of causation, Mr. Caird perhaps tends too much to class together formal and final causes and to oppose them to mechanical or efficient causation. There can be little doubt that to Aristotle the type of causation which is the primary object of science is what Mr. Caird (in a note) distinguishes as a second sense of efficient cause: 'in other cases the term efficient cause is used by Aristotle in the modern sense, as meaning the conditions of an effect, which, as Aristotle also observes, do *not* precede it in time'. This meaning of efficient cause is clearly very different from the ordinary meaning, and it involves the conception of formal cause, which consists simply of the explicit and definite statement of the conditions on which the effect depends.

The next lecture is important: it sums up the results of the Aristotelian philosophy. The chief subject discussed in it is the relation of God to the world. Mr. Caird points out that 'movement is always of one thing by another, and a self-mover, as Aristotle urged against Plato, is *ex vi termini* impossible'. 'But,' he goes on, 'the idea of an "unmoved mover" seems not less liable to objection, unless we can admit the conception of a kind of action which, without being motion, yet produces it in other things.' Hence Aristotle in his account of the relation of the world to God 'seems always to move upwards and not downwards. In other words, he seems always to be showing that the finite world cannot be conceived to be complete and independent, and that its existence must therefore be referred back to God; but not that in the nature of God, as he describes it, there is any necessity or reason for the existence of the world.' 'It is not that God loves the world, but that the world loves and longs for God.' 'Like many subsequent writers, he seeks to bind the world to God without binding God to the world; nor does he make any use of the pregnant hint of Plato, that God is good, and that goodness must seek to communicate itself.' These quotations will give some indication of the nature of Mr. Caird's criticism of Aristotle. In reply one would be inclined to allow that Aristotle's view is impossible; as Mr. Caird says, the conception of an unmoved mover is wholly unintelligible. But Mr. Caird's view seems to present equal, or greater, difficulties. It implies either that we must conceive God as somehow existing outside of, or apart from, the world, and therefore as finite, or that we must attempt the impossible feat of rising above the opposition of the theoretical and the practical life to the consciousness of a unity that transcends both. The weakness of Aristotle's view and of all similar attempts consists simply in the fact that it endeavours to regard from a *single* point of view (that of θεωρία) both the world of θεωρία and the world of πρᾶξις. It is like trying to look at a sphere, say, from both the inside and the outside, at the same time. There is no difficulty in understanding how these two ways of looking at a sphere are possible: but it is impossible to combine them.

The next twelve lectures deal with Post-Aristotelian philosophy, and especially with the two schools which are of most importance for theology, Stoicism and Neo-Platonism. Mr. Caird explains with great care and fulness the nature of these efforts of decadent Greek philosophy to attain to the unity which was beyond the grasp of the supposed 'dualism' of Plato and Aristotle. The last lecture discusses the influence of Greek philosophy upon Christian theology. Here the author's tendency to identify, or at least to connect very closely, religion and metaphysics shows itself very clearly. He is unable, for instance, to accept the view of Harnack and others that 'the great controversies of the early Church about the Trinity and the Incarnation were controversies about words, or at best about subtilties introduced by Greek philosophy into the Christian religion, which have no real significance for later times'. But his defence of his own view seems to miss the point. It only succeeds in showing that these metaphysical problems of the early Church are in a sense still the problems of modern philosophy: it does not explain what bearing they have on religion.

It is impossible to review in detail these lectures considered simply as a history of Greek thought. We might perhaps single out the treatment of Plato as specially happy. In one point Mr. Caird's exposition seems open to criticism. The well-known difficulty of interpreting the passage in the *Phædo* where Socrates is represented as explaining his relation to Anaxagoras is discussed in an appendix to the fifth lecture. Mr. Caird's solution seems unsatisfactory and to call for notice. There is little difficulty in seeing what Plato means by the δεύτερος πλοῦς: the question is, what is the πρῶτος πλοῦς? One of two things must be meant: either (1) the method of the physicists, or (2) the method that Anaxagoras had suggested, although as a matter of fact he fell back on the physical method. The drift of the passage would naturally indicate that the πρῶτος πλοῦς was the second of these. But Mr. Caird takes it to be the first. 'It is,' he says, 'a touch of Plato's humour that he speaks of his own method, which rises gradually from the definition of lower to the definition of higher universals, as a δεύτερος πλοῦς; and, again, that he describes himself as dazzled, as by the "sun in eclipse," when he looks at things with the eyes of sense, and as, therefore, turning for relief to the reflexion of things in thought. He has used nearly the same language a little earlier in the dialogue (79, C) where he declares that one who tries to apprehend reality by means of the senses "is disturbed and distracted and staggers like a drunken man".' This seems to involve a confusion between the illustration and what is illustrated—two things which must be kept completely apart. There is nothing to suggest that the phrase δεύτερος πλοῦς is intended to be ironical or humorous. It is much more natural to suppose that the πρῶτος πλοῦς is the attempt to see all things in the light of a single principle of unity. Abandoning this on the ground of its difficulty, Plato proposes to fall back on the less

ambitious design of taking separate parts or sections of the universe and regarding each of these in the light of its special principle of unity. The relation of such a principle of unity to its special sphere could very well be represented as an εἰκών of the relation of the supreme principle of unity to the universe as a whole. The qualification contained in the words ἴσως ἐν οὖν κτλ. means simply perhaps that we are not to suppose that to study a set of particular facts with reference to their principle of unity is to view them less really or truly than when we regard them as mere particulars.

Regarded as a record of the development of Greek metaphysical and ethical thought, the value of the work can hardly be overestimated. It is the best account in English of the development of Greek thought. The excellence of Mr. Caird's style is well known. In these volumes it is sustained throughout at its highest level. At times, it is true, he tends towards a rather abstract mode of expression, and he is not always successful in putting his points in a vivid and memorable way: but on the whole for exposition of this kind it would be difficult to invent a better form of expression. All students of Greek philosophy will be grateful to Mr. Caird for this brilliant work.

R. P. Hardie.

Science and Hypothesis. By H. Poincaré, Member of the Institute of France. With a preface by J. Larmor, D.Sc., Sec. R.S., Lucasian Professor of Mathematics in the University of Cambridge. London and Newcastle-on-Tyne: The Walter Scott Publishing Co., Ltd., 1905. Pp. xxvii, 244.

In this book, which consists in the main of previous articles somewhat re-written, M. Poincaré's well-known merits appear to the full—his lucid and trenchant brevity, his air of easy mastery, which often makes his thought appear less profound than it is, and his power of co-ordinating the whole domain of mathematics and physics in a single system of ideas. But these merits, great as they are, are accompanied by what cannot but appear as defects to any one accustomed to philosophy. His fundamental principles, as a rule, are assumed without discussion, presumably on the ground that they are self-evident; yet many of them are at the extreme of one side in time-honoured controversies. Such are: Deduction can never give new truth; mathematics, so far as it is not mere definition, derives its certainty from the fact that its principles concern, not nature, but properties of the mind; science teaches us, not about things themselves, but about their relations; "experiment is the sole source of truth. It alone can teach us something new; it alone can give us certainty." There are also some principles embedded in the chapter on probability; but these are harder to discover or to state precisely.

The first section, on Number and Magnitude, begins with the

question: If mathematics is not deductive, why is it rigorous? and if it is deductive, why is it not one vast tautology? The conclusion arrived at is that all pure mathematics depends upon mathematical induction—the principle, that is, that if a property belongs to the number 0, and also belongs to $n + 1$, whenever it belongs to n, then this property belongs to all the natural numbers. This principle may be expressed popularly by saying that we can get to any one of the natural numbers, starting from 0, by successive additions of 1 continued for a sufficient (finite) number of times. This principle, M. Poincaré says, enables mathematics to pass from the particular to the general; it condenses within itself an infinite number of syllogisms; it is a synthetic *a priori* intuition; it affirms the power of the mind to conceive the indefinite repetition of the same act, when the act is once possible; it is "necessarily imposed upon us, because it is only the affirmation of a property of the mind itself" (p. 13); yet "this induction is only possible if the same operation can be repeated indefinitely" (p. 16).

Since the above theory of deduction underlies most of the later parts of the book, I shall consider it at some length. First of all, the meaning of mathematical induction according to M. Poincaré is far from clear. It affirms, we are told, that we can conceive the indefinite repetition of an act which is once possible. Yet it is not a mere repetition that is meant. What is affirmed is not (say) that if we can at one time add 1 to 2 then we can do so at another time; what is affirmed is that if we can add 1 to 2 and so get 3, we can add 1 to 3 and so get 4, and so on *ad infinitum*. That is, it is affirmed that if an operation transforms an object a into an object b, it can be performed on b so as to turn it into c; in better words, if a has the relation R to b, then b will have the relation R to some term c. Now this property holds of some relations, but not of others;[1] hence M. Poincaré has to admit that induction is only possible if the same operation can be repeated indefinitely. Hence his *a priori* synthetic intuition becomes: "If an operation is one of those that can be repeated indefinitely, then it is capable of indefinite repetition". It can hardly be this principle which saves mathematics from being a "vast tautology".

The fact is, of course, that M. Poincaré only means to apply his principle to the operation of adding 1 to a number. The property of the mind which is in question is, therefore, this: "It is possible to add 1 to any number whatever". But this does not yield us the principle of mathematical induction, which says not merely that the addition of 1 will always give a number, but that *every* natural number can be obtained by such additions starting from 0. It limits the natural numbers at the same time that it shows the series of them to be endless: they all appear in this series, any point of which can be reached by successive steps starting from 0. Now this limitation, which is what is really used when proofs are con-

[1] *E.g.*, it is not the case that if a is the wife of b, b must be the wife of some one else.

ducted by means of mathematical induction, is not a synthetic *a priori* intuition, or a property of the mind, or a condensation of an infinite number of syllogisms; it is merely the *definition* of a *finite* number. A finite number means one to which mathematical induction applies; an infinite number means one to which it does not apply. There are infinite numbers, and many theorems can be proved concerning them, as well as concerning things which are not numbers at all; hence plainly mathematical induction is not what accounts for the fruitfulness of mathematics.

Again, M. Poincaré is mistaken in regarding mathematical induction as a means of passing from the particular to the general: it is merely a means of passing from one general proposition to another. Our premisses are, first, that a certain property belongs to 0; this, we may admit, is particular; second, that *every* finite number n is such that, if n has the said property, so has $n + 1$: this is general. The conclusion is that every finite number has the said property; but this conclusion has exactly the same degree of generality as our second premiss. The appearance of passing from particular to general arises only from neglect of our second premiss.

The notion that a principle is rendered certain by expressing a property of the mind is also curious. "The mind" must be somebody's mind; all minds are a part of nature; minds differ from time to time and from person to person; and psychology is not usually considered more certain than arithmetic. M. Poincaré's view, like Kant's, assumes that we know already, before we have any other knowledge, that all minds are alike in certain respects; that their likeness consists in their all sharing certain beliefs; that these beliefs have no warrant except their universal existence, *i.e.*, that they are universal delusions; and that universal delusions are what we call *a priori* truths, and as such are the indispensable premisses of all really indubitable knowledge.

M. Poincaré gives no reasons for the view that deduction can never give new truths. The fact is that the general principles of deduction are analogous, in this respect, to what he conceives mathematical induction to be; that is to say, they lead to conclusions which are other than themselves, so that in this sense they are synthetic. We shall conclude, therefore, that mathematics does not, as M. Poincaré affirms (p. 24), contain an inductive element, and yet is not "a vast tautology".

The second part, on Space, repeats the contention that none of the various Euclidean and non-Euclidean geometries is truer than another, but that the Euclidean is the most convenient. The argument is, that all our experiments concern *bodies*, and that any apparently non-Euclidean result can be interpreted as due to the nature of bodies, not to the nature of space. Admitting this, I do not think the consequence follows. In the first place, it does not follow that the Euclidean geometry must always remain the most convenient. But this point is of less importance than the follow-

ing: There are relations which arrange the points of space in any order imaginable, *e.g.* so that objects which we perceive as near together would be widely separated, while objects which, in the perceived spatial order, are very distant, would come between objects which are very near to us. In short, relations subsist between points which make a complete re-arrangement of them, not at all resembling the arrangement we perceive. These other arrangements differ from the one we perceive, it would seem, just in the fact that we do not perceive them; and this brings out the necessity of supposing that the spatial relations we regard as actual *are* perceived. But if this is the case, then those relations constitute a Euclidean or some definite non-Euclidean space, though it may be impossible for us to know which. In any case, it is an empirical fact that the material parts of any ordinary object are nearer to each other than are the parts of two objects between which the said object lies, and that we do perceive bodies as made up of parts more or less contiguous. All this shows that matter is arranged by perception in a spatial order which is certainly different from some of the possible orders; and it is only for reasons whose origin is in perception that we select at all from among the orders that are *a priori* possible. And this suffices to prove that geometry is not *wholly* conventional, as M. Poincaré contends.

The third part, on Force, discusses rational mechanics, and finds that its principles also are really definitions. "There is no escape," we are told, "from the following definition, which is only a confession of failure: *Masses are co-efficients which it is found convenient to introduce into calculations*" (p. 103). The discussion of which this is the conclusion is admirable. But it is admitted that the principles of mechanics were obtained, and ought to be obtained, by experiment, and this introduces an element which is not conventional. The view advocated seems to be that actual bodies behave in a way very like the way in which the ideal bodies of rational mechanics behave, but that the principles of mechanics are rendered conventional by the fact that, whenever they might seem to be violated, we prefer to invent hypothetical bodies or hypothetical motions which prevent the violation. Thus a principle, it would seem, becomes conventional the moment we are less willing to abandon it than to seek a supplementary hypothesis to preserve it. It is possible, however—though M. Poincaré takes no account of the possibility—to believe that such a principle is strictly true, and that any supplementary hypothesis which may be necessary to preserve it is thereby proved to be also true. M. Poincaré ignores such a view, because it leads to the result that a law may be true although experiment can neither prove nor disprove it. The course of science seems to be, that a general principle is found to account for a number of phenomena, while others, though not inconsistent with it, are not to be explained by it without further hypotheses. In every subsequent experiment, as M. Poincaré points out, no one hypothesis is really being tested, but a whole body of hypoth-

eses; and if any one of them is regarded as beyond doubt, it will almost always be possible to explain a phenomenon by denying one or more of the other hypotheses. Hence a hypothesis which we no longer regard as open to doubt is thereby withdrawn from the region of experimental verification; but it does not follow that such a hypothesis is a mere convention. Indeed, if it did, mere completeness of proof would constitute disproof.

There is an unsatisfactory chapter on absolute and relative motion, in which it is admitted that, from Foucault's pendulum, from the flattening of the earth at the poles, and from the different weights of a given mass in different latitudes, it would be possible to infer the rotation of the earth even if the sky were always cloudy and we saw no heavenly bodies. It follows that the rotation of the earth would be convenient as accounting for the phenomena even if there were no heavenly bodies; but this involves absolute rotation, and is therefore meaningless, in M. Poincaré's opinion. He says (p. 117): "This affirmation, 'the earth turns round,' has no meaning, since it cannot be verified by experiment . . . or, in other words, these two propositions, 'the earth turns round,' and 'it is more convenient to suppose that the earth turns round,' have one and the same meaning". But if 'the earth turns round' has no meaning, it has the same meaning as 'Abracadabra,' and therefore, if M. Poincaré is right, it has the same meaning as 'it is more convenient to suppose that Abracadabra'. But M. Poincaré supposes it true that it is more convenient to suppose the earth turns round; yet I cannot see what convenience is going to result from supposing Abracadabra. In short, what it is convenient to suppose must have some meaning; hence, it would seem, the facts which make it convenient to suppose that the earth turns round prove that there is such a thing as absolute rotation.

The fourth and last part, on Nature, deals with physics, and points out where, according to M. Poincaré, the domain of convention and definition ceases, and substantial scientific laws come into play. There is an interesting comparison of the methods of English and French physicists, giving the preference, in the main, to the former as more experimental and less concerned to rear a logical edifice. There is also an interesting but unsatisfactory discussion of probability, whose importance, in inductive proofs, M. Poincaré very justly emphasises, though this discussion is rather marred, logically, by the assumption that, in the long run, the most probable distribution, say of heads and tails, will actually occur (p. 188); whereas we can only say that it will *probably* occur. But I pass by these matters to consider the main theses of this part, which are two: (1) that science deals only with the *relations* of things; (2) that experiment is the sole test of truth.

(1) Questions concerning the real, as opposed to the relations of real things, are said to be illusory and devoid of meaning (pp. xxiv, 163). Certainly we have much more belief in the accuracy

of our perceptions of relations than in that of our perceptions of qualities. When we see green in one place and red in another, we are willing to believe that secondary qualities are subjective, but not that the fact of difference between what is in the two places is an illusion. It is only by holding fast to relations as perceived that science manages, on an empirical basis, to construct a world so different from that of perception. Why we should trust in our perception of relations I do not know; but it is a fact that we do so. But I do not see how it can be maintained that questions as to the qualities of real things are *unmeaning*. The proposition amounts to this, that if *a* really exists, a statement about *a* has no *meaning* unless it asserts a relation to a *b* which also really exists. The fact seems to be, not that such propositions are unmeaning, but that, except in psychology, they are unknowable. We may even push the theory further, and say that in general even the relations are for the most part unknown, and what is known are properties of the relations, such as are dealt with by mathematics. And this, I think, expresses substantially the same view as that which M. Poincaré really holds.

(2) That experiment alone can teach us something new, is a view underlying all M. Poincaré's theories, and is connected with his opinion that deductions are mere tautologies. Yet he himself admits that a good experiment teaches more than an isolated fact (p. 142), and that "the physicist who would content himself with experiment pure and simple would be compelled to enunciate very extraordinary laws indeed" (p. 143). But it is surely plain that if experiment were the *sole* source of truth, no experiment could teach anything beyond itself. To do this, the result of the experiment must imply other propositions, and this implication, in the long run, cannot itself be wholly proved by experiment. We speak of general laws being proved by experiment, but the mere fact of their generality shows that they are not *wholly* proved by experiment, since all experience is of particulars. When a general law is proved by experiment, it is merely selected by experiment from among several, which are themselves regarded *a priori* as the only possible laws. M. Poincaré more or less admits that the uniformity of nature and other fundamental principles cannot be *proved* by experiment; but he concludes that they are only probable. His argument in favour of their being even probable depends, however, upon assumptions as to probability — notably that an observed regularity is not likely to be due to accident—which are certainly incapable of experimental proof, or of being made probable without some axiom concerning probability.

The book throughout is interesting, and has the great merit of making its meaning perfectly definite. Moreover, M. Poincaré's opinions, whether one agrees or disagrees, are such as it is by no means easy to disprove, and the disproof, when it is possible, is instructive. Prof. Larmor's introduction suggests that its author feels a strong objection to M. Poincaré's scepticism; but

this scepticism is never wanton, and has always a constructive purpose. I cannot but think that the translator has sometimes misplaced a negative; *e.g.*, on page 48, "these geometries of Riemann . . . can never be . . . purely analytical" surely does not translate "ne peuvent jamais être que," which means "can never be more than". Similar mistakes seem to occur on pages 18, 162, 205.

B. Russell.

Einführung in die Metaphysik auf Grundlage der Erfahrung. Von Dr. G. Heymans. Leipsig: J. A. Barth, 1905. Pp. 348.

Prof. Heymans has written an extremely able book designed to prove that the different demands made by experience and reflexion, which all other views of the world could only partially satisfy, are completely met by Psychical Monism, the final metaphysical standpoint, towards which all other systems rationally and inevitably tend the more exactly they take account of their presuppositions and the more energetically they try to reduce these to their simplest form. The various stages on this route, naïve Realism tinged with Dualism, scientifically perfected Realism and Dualism, monistic Materialism, realistic Parallelism, Positivism, etc., form the divisions of Prof. Heymans' book, and each is in turn subjected to an admirably sober, earnest and minute scrutiny.

At the outset the author rejects the definition of Metaphysics as the Science of the Absolute as at least misleading. We are not to assume different degrees of reality, the highest reserved for the investigation of Metaphysics. We know only one conception of reality derived from that which is immediately given, and have to recognise that the Given Conditioned, everywhere, and in all its forms, is just as really there as the not given Condition through which we explain its existence. Metaphysics is only knowledge, as perfect, and as little relative as possible, of the same object to the knowledge of which all sciences are directed, that is, the same reality comprehending all our experience, with its grounds and its conditions. The relativity of empirical knowledge can never mean that it has no object, but only that its object is other than was believed; while knowledge of the reality behind any appearance would not replace a false by a correct knowledge, but would rather add the knowledge of one object to that of another (pp. 12-18).

Alongside the sensations, presentations, feelings and other contents of consciousness, we all, says Prof. Heymans, assume the existence of yet something more. This, in contrast with these given contents, is an external world, a something not given, a something external to consciousness (pp. 30-35). Prof. Heymans is certainly right here as against Külpe, who appears to miss the point. It is impossible to doubt that the objects of thought constituting the external world exist independently of their existence

as a content of, at least, our finite consciousness. Indeed this distinction between the content and the object of perception is of vital importance in dealing with the questions which the somewhat paradoxical nature of Psychical Monism provokes.

I pass over the earlier sections of Prof. Heymans' book and come to the point which marks the transition to Psychical Monism. We have attained to the perception that the given parallelism which has to be explained between conscious and cerebral processes, is not given or to be explained, as a parallelism between two actual processes lying open to us, but rather as a parallelism between a series of processes lying open to us in the stream of psychical occurrences, and a series of merely possible perceptions, *viz.*, the cerebral processes corresponding to these psychical occurrences, and all the other phenomena of Nature, by no means actually given, but for which we have grounds to assume that, under the most favourable conditions, they would be actually given to an ideal spectator. Hence the real physical series of realistic Parallelism shows itself as an entirely superfluous intermediary between the unknown reality, forming the ground of everything given, and the actually present or possible physical perception. Since, for this doctrine, there is not to be assumed an Unknown Third in addition to two known realities, the psychical and physical, but, besides a known reality, the Psychical, an unknown other reality, Prof. Heymans coins for it the designation, *Lehre vom unbekannten Andern* (p. 200). He considers that this hitherto nameless view of the world has more supporters than many the names of which are famous, particularly that it is the view of men of science acquainted with epistemological questions and who have shaken off the cruder Materialism. Unfortunately it is under the necessity of denying the causality of the Will, and thus leaving unexplained the agreement of content between that which is presented and willed and the corporeal movement immediately thereafter to be observed. A determination of the Will $Ps_\eta + I$ points back to a fundamental process $X_\eta + I$ in the Unknown Other. This $X_\eta + I$ may condition further processes, and perhaps $X_\eta + 2$ as the functioning of the motor nerves and muscles $ph_\eta + 2$, $X_\eta + 3$ as the bodily movement $ph_\eta + 3$ may come to be perceived. But, on the theory, it is impossible to see why, between $Ps_\eta + I$ and $ph_\eta + 3$ not merely a relation of regular sequence, but of agreement of content can be exhibited. As against Positivism Prof. Heymans maintains the right of applying the principle of Causality to the external world, and the necessity which that principle lays upon us of assuming the same, a necessity to which Positivism tacitly submits when it assumes "possibilities of sensation" or "reduced sensations". How am I to rise to that unknown world revealing itself in my perceptions? Let us start from the stringent connexion between those processes of consciousness immediately given to me and those possible perceptions which I call perceptions of my own cerebral processes. There must be at least sufficient warrant for

the assumption that my conscious processes, in connexion with the relations open to perception as the adaptation of the organs of sense of an ideal spectator, contain the causes of the corresponding perceptions of brain processes, to justify its searching investigation. With that assumption is expressed the fundamental thought of Psychical Monism. It assumes that the objects of all possible perceptions of cerebral processes, that is the realities which, under favourable conditions, could occasion these perceptions, are, in the most literal sense, identical with the processes of consciousness (p. 239). Considerations of space prevent me from reproducing any of the ingenious schemata by which the author seeks to demonstrate that, to every causal relation between any real process, there must be given to the ideal spectator a pseudo-causal relation between corresponding phenomena of Nature. Psychical Monism is able, he asserts, to perform even the feat of maintaining the closed system of natural causation without either denying the psycho-physical connexion or leaving it unexplained.

We certainly arrive here at a crisis in the Psychical Monism espoused by Prof. Heymans, and shared to a certain extent by the present writer. I am repelled by a sense of almost intolerable artificiality. I cannot regard as self-evident the assumption that everything psychical must have its representative in the series of physical phenomena (p. 259), and, until I do, I shall be chary about accepting Prof. Heymans' contention that the closed system of natural causation, in which for every combination of consciousness there is a definite cerebral phenomenon, is an imperative demand of Psychical Monism. It is doubtless true that the denial of interaction between psychical and physical is differently founded and has a different significance for Psychical Monism from what it would have for Dualism, for example; but, after all, it leaves us with the fact that our every action and thought is susceptible of a purely mechanical explanation. Can we face that conclusion? Prof. Heymans is able to talk of *subordinating* the phenomena of Nature to psychical causality (p. 294), and can conclude, that, if the phenomena of the brain mirror a causal connexion permeated with teleology, causality and teleology are not opposed, but the latter embraces every scrap of the first (p. 317). Is this a perfectly legitimate judgment of value? Can one *subordinate* one side of this parallelism to the other, and, if not, might one not just as well talk of causality wiping up every trace of teleology?

In conclusion Prof. Heymans gives us in bold outline the extension of the psycho-monistic conception of one's own self to a psycho-monistic conception of the world. He gives rein a little to his fancy—I am not blaming him, no one could help it at this point—but I must confess that the analogy between Humanity and the Earth and brain and body (p. 317) appears to me much more imperfect than he maintains. Still, that does not matter. He remains justified in asserting that the bold speculations of Fechner receive support from the labours of Spencer. The fact

that, from the history of the solar system and the Earth in their sensuous appearance, and from the history of mankind and of individual man, both so and in his spiritual essence, the same law of development could be abstracted, is significant, as he says, for the supposition that, in the former complexes of reality similar concentrations of consciousness are taking place as we are acquainted with in the latter.

Even if the psycho-monistic view of the world were established, Prof. Heymans considers that science would not have spoken its last word, so long as our knowledge of the factors of temperament, character, etc., which play the part of "natural forces" in indicating, if not filling up the gaps in our knowledge, remains imperfect. Such considerations, and others forcing us to assume a timeless reality, seem to point to the fact that the world of Psychical Monism can scarcely be the whole world, but perhaps, in its full range, the manner in which a deeper-lying reality, that may be for ever withdrawn from our knowledge, manifests itself (p. 323). Nevertheless, the reality which we know is just as real as the othe reality whose existence we merely suspect. The fact that all the psychical life which is given to us as real, or which we have good grounds to posit as real, passes for us through time, would not be abolished but explained by the most comprehensive knowledge, and practically only this part of Being and this knowledge have any interest for us (p. 329). And the practical consequences of Psychical Monism are such as to press for a more immediate decision than do its speculative. We have to assume as our ultimate fact that, in the world-consciousness embracing all separate consciousness in itself, there are embedded different strivings directed partly to special, partly to universal ends, which reach expression in individual concentrations of consciousness in manifold combinations. The antithesis between egoistic and ethical tendencies in the individual would only be the special manifestation of this antithesis, and to its manifestations moral judgment ultimately refers. Of religious consolations we are left the consciousness of unity with the whole world; the conviction that one's actions could forward or hinder the development of the whole, and the trust that, in his work for the whole, one does not stand alone, but that higher powers are directed to the same ends as himself, and warrants the expectation that they will be attained (p. 344). Man is an integral part of the world-consciousness, in which the utmost perfection is not realised at the outset, but has to be striven after. The time and degree in which it is attained is determined by the activity of infinite psychical forces, of which an infinitesimally small part, but one equal in worth to the others, reaches expression in the will and action of each individual man. Man is assured his share of responsibility for the course of the world.

Prof. Heymans makes a difficult matter as clear as it can be made, and impresses his conclusions with eloquent simplicity.

DAVID MORRISON.

VIII.—NEW BOOKS.

Physiological Psychology. By W. McDougall. Dent & Co. Pp. viii, 172.

This little book should be heartily welcomed both by psychologists and physiologists, and particularly by those whose work is in the somewhat ill-defined border-land which connects their respective fields of inquiry. The general standpoint of the author will give satisfaction to all competent psychologists, however much they may disagree with particular solutions advanced. For Mr. McDougall freely admits that neurology in the main must at present be satisfied with providing plausible explanations in physiological terminology of what is already known and analysed psychologically. Yet he would not have the psychologist underrate the gains to his science from such work as the study of the effects of nervous lesions, work, by the way, which is as much psychological as physiological. However, science has now set before itself the task of showing the interconnexions or parallelisms between mental facts and physiological facts, and hopes, now approaching from one side and now from the other, as the one or the other may be better or more easily known, to advance both sciences mutually. Nor need we be deterred by any preliminary caution that we must first make up our minds whether there is any connexion or not between mind and body. We may safely set aside the questions, (1) do they interact? and (2) are they merely parallel? not because of their unimportance, but because it is sufficient for the physiological psychologist to establish sequences and correspondences between mental facts and bodily facts. In this process, the author believes, material will be forthcoming to help to a solution of these vexed questions. Practically the experimentalist will be an interactionist, though he may, on reflexion, be convinced that psycho-physiological parallelism would serve his purpose equally well. Mr. McDougall regards the practical solution as also the most satisfactory philosophically.

But, whilst fully agreeing with the general standpoint of the author, I think there is considerable danger, in the endeavour to establish connexions between the sciences of physiology and psychology, that psychological explanations will be accepted, not because they are the best psychologically, but because they fit into some fairly simple physiological scheme. For example, the physiologist tends to proceed as though 'Association' were practically the exclusive factor in mental development, cells and fibres obviously lending themselves to such a view. But mental life as we know it presents 'Dissociation' as a factor perhaps of equal importance and equally requiring physiological explanation, not as a catastrophe or disease, but as normal process. A method is suggested whereby sight and sound may be associated, but have we one whereby sound and sight can be dissociated? How does hearing, for example, cease to be coloured? And this of course is only one special case of

'Dissociation'. To realise again that, from an evolutionary standpoint, nerves are paths of least resistance, but not therefore the only paths, would be useful. "Flies can't feel because they ain't got nerves like ours," as a schoolboy once said to me, is the *reductio ad absurdum* of this neurological tendency to believe only in clearly marked anatomical distinctions.

The tendency to simplify unduly so as, somehow, to get the psychology into a physiological scheme leads to such views as that Inhibition is purely a negative process; not a positive check, but only a drafting of nervous energy elsewhere. To inhibit a thought or action is, on this view, merely to do or think of something else. Again the physiologist can show how, on a neurological scheme, we may form habits and do and think more easily; he does not show us how the easy becomes distasteful, disused and, finally, difficult. Probably, however, the author would agree with much of this and would assert the advisability of giving physiological explanation to the easy problems first. But my fear is that, without a very clear understanding on the point, physiological schemata of the kind indicated may actually have a retarding influence on psychology. We shall be told that such and such cannot be true psychologically since there is no neurological basis for its operation. Mr. McDougall would, I am sure, join with me in deploring and, I think, in expecting this.

The book suffers, perhaps, from condensation, but doubtless that is due to the conception of the series and not to the author. A more disputable matter is his avowed practice, in the many debatable points of neurology, of giving only his own view, on the ground that it is better to present a coherent conception; but as this book will be used, I hope, by young students, there is much force in the argument.

On detailed points of agreement and difference with the author there is now neither space nor opportunity to dwell; the differences, where they exist, arise from the general considerations outlined above; the agreements are many, and cordial thanks are due to the writer, not only for announcing a possible scheme of working agreement between physiologist and psychologist, but for many interesting and valuable exemplifications of his own method.

And to metaphysics, too, there is some hope of contribution. The scientific philosophising of the nineteenth century, which dogmatically announced that what it did not like was unknowable, is giving way to an agnosticism which admits ignorance but hopes to find out. To me, at least, work like that of the writer of this book seems likely to provide a basis of fact which will go far to settle disputed points in the relations of Body and Mind, and, ultimately, to narrow, if not completely to solve, the outstanding metaphysical issues.

W. H. Winch.

The Mental Traits of Sex: an Experimental Investigation of the Normal Mind in Men and Women. By Helen Bradford Thompson, Ph.D. The University of Chicago Press, 1905. Pp. 187.

This little book claims to be "the first attempt to obtain a complete and systematic statement of the psychological liknesses and differences of the sexes by the experimental method". It consists of descriptions, results and brief discussions of a number of mental tests applied to twenty-five women-students and an equal number of men-students of the University of Chicago, of ages ranging from twenty to twenty-five. The tests included determinations of the thresholds of sensitivity and of

sensible discrimination of all the senses, measurements of motor ability and endurance, tests of ingenuity, as displayed in rapidity of solving a number of puzzles, mechanical and other, of powers of memorising and retention, of rapidity and variety of the associative processes, of the degree of change in pulse and respiration under various conditions, and lastly a series of questions designed to bring out the subject's estimate of his peculiarities of faculty and disposition. The tests seem to have been well devised and carefully applied, and the results are shown in convenient diagrammatic form.

The differences between the two groups, male and female, brought out by these tests are very small, and are summarised by the author as follows: "Thresholds:—Women have lower thresholds in the recognition of two points on the skin; in touch; in sweet, salt, sour and bitter taste; in smell; in colour; and in pain through pressure. Men and women are alike in respect to the upper and lower limits of pitch. Men have a lower threshold in the perception of light. Discriminative sensibility:—Women have finer discrimination in pitch and in colour. Men and women have equal discrimination in temperature, in odour and in passive pressure. Men have finer discrimination in lifted weights; in sweet, sour and bitter taste; in shades of gray; probably in areas on the skin; and in visual areas." Motor ability in most of its forms is better developed in men, namely in strength and rapidity of movement, in endurance and in precision; while women have the advantage in the formation of new co-ordination of movement. As for the intellectual faculties, women are decidedly superior in memory and possibly more rapid in associative reproduction. Men are probably superior in ingenuity. There is little, if any, sexual difference in the degree of domination by emotion; and social consciousness is more prominent in men and religious consciousness in women.

The writer argues that such small differences as her researches have revealed are probably due wholly, or in chief part, to differences of social environment and training.

The criticisms that suggest themselves are: first, that the numbers of individuals are too few; it is to be regretted that when so much labour has been given to the research, the same methods should not have been applied to a still larger number of individuals of both sexes; secondly, that the tests applied are quite inadequate to bring out the innate differences that are socially important, *e.g.*, it is obvious that the replies of individuals to such questions as "Are you sympathetic?" and "Are you socially timid?" must be determined by the standards of sympathy and timidity of the subject, and that the differences of standard in such matters, that certainly obtain between the sexes, may obscure very great real differences in these respects. Should the authoress ever become an impartial observer of a family of boys and girls she will probably find occasion to revise her conclusions in respect to many of the more important points.

W. McD.

The Existential Import of Categorical Predication: Studies in Logic. By A. Wolf, M.A. Lond., B.A. Camb. Cambridge University Press, 1905. Pp. xii, 164.

This is an exhaustive discussion of the problem, in which the author gathers together and criticises in a highly expert fashion all that has been said about it by the leading modern logicians. The theories of Dr. Venn and Dr. Keynes here get a thorough overhauling, but Mr. Wolf

seems equally familiar with the scholastic doctrines connected with the same topic.

His own theory is that of existential non-implication, and it comes to the front quite early. It is a consequence of his doctrine of the use of terms. Every term has 'objectivity,' but no term necessarily implies the 'reality' of the object of which it is a name. The distinction, however, that our author offers between objectivity and reality, though at first sight obvious, is perhaps not philosophically satisfactory.

To have objectivity is to refer to something, but in the case of 'fairy,' 'centaur' and 'round square' that something does not have 'actual existence'. The ordinary doctrine, that the object of reference has always actual existence in some 'universe of discourse,' whether of physical fact, mythology or madness, Mr. Wolf will not allow, because he thinks that it is thereby implied that there are various universes of discourse other than the actually existing universe. But surely this is not so; any sane doctrine of separate universes of discourse must always regard them as part of the one real universe. Figments of the imagination are, after all, real figments, and, as Mr. Wolf admits, their names refer indirectly to reality because the objects which they indicate exist in the actual thoughts of men.

The whole controversy hinges on the definition of actual existence. If by that we mean existence other than in the thoughts of men, then certainly no term carries with it a guarantee of the actual existence of its object. But is it not uncritical to select intuitiveness as the criterion of this actual existence and not the consistency of the judgments about an object with experience as a whole?

G. R. T. Ross.

The Evolution of Knowledge: a Review of Philosophy. By Raymond St. James Perrin. London: Williams & Norgate; New York: The Baker & Taylor Co., 1905. Pp. xiii, 308.

The first part of this 'review' is a brief history of philosophy during its 'pre-evolutionary' period, which extends from the time of Thales to that of German Idealism and Sir William Hamilton. The evolutionary period is monopolised by George Henry Lewes and Herbert Spencer. It is from these latter philosophers that Mr. Perrin claims to derive his main doctrine—that 'motion is the ultimate reality,' thought, duty, beauty being all forms of motion.

Unfortunately the immediacy with which this belief presents itself to our author tends to make him dispense with any coherent proof of it. Perhaps, also, the value of his conclusions is hardly sufficient to excuse the vagueness of his language throughout and the inaccuracy of many of his statements.

G. R. T. Ross.

Philosophie der Botanik. By Dr. J. Reinke, Professor of Botany in the University of Kiel. Natur- und Kulturphilosophische Bibliothek. Leipzig: Barth, 1905. Pp. 201.

More than a century and a half ago Linné wrote what he called *Philosophia Botanica*, but it was almost all purely descriptive science, and there are only a few sentences which even the most generous can call philosophical. Since 1750 Botany has got into closer grips with the life of plants than was possible in Linnæan days, and has more adequately appreciated its mysteries. The cell doctrine, the analysis of metabolism,

the study of development, the conceptions of growth and variation of adaptation and evolution, and so on, have changed the whole science, and have raised problems which almost inevitably lead the student into philosophical discussion—to a higher criticism of the categories 'life,' 'organism,' 'individuality,' 'correlation,' 'adaptation,' and the like, with which he cannot dispense even in his primary task of descriptive formulation. It is difficult to deal luminously with these big conceptions, and the botanist pure and simple is more or less content to tack on new leaves to the taxonomy, organography, and the like, which formed the bulk of Linné's immortal work. But Prof. Reinke thinks it is time to develop the few *obiter dicta* in which the illustrious Swede gave expression to his more generalised thinking about plants. Thus Reinke's *Philosophie der Botanik* comes as a quite new sort of appendix to Linné's *Philosophia Botanica*. He discusses 'das Wesen der Pflanze,' the forces that work within it, the form that the organism takes, its adaptiveness to 'ends,' its individual development and racial evolution, and, finally, the origin of life. It is all very interesting, not too biological to be tedious reading for the philosopher, and not too philosophical in terminology to be baffling to the biologist. But what does it all amount to?

Reinke cannot recognise in the plant *merely* a chemico-physical system; he shows that we cannot at present spell out its life in terms of the chemico-physical alphabet; the mechanical or materialistic interpretation breaks down hopelessly as yet. Of course the plant is a material system with resident energies and 'constellations' of energies, and there are items of its life which may be formulated as items in an engine's activity might be; but just as we cannot interpret the passage of a locomotive from Aberdeen to London without postulating an intelligent engineer and an alert driver, so the behaviour of plants requires us to postulate 'superior forces,' 'dominants,' 'steersmen of the energies'. These 'dominants'—which work unconsciously—are not exactly psychical forces, but they are 'trans-mechanical,' and they work—objectively regarded—'intelligently'. In Reinke's cosmogony there are four groups of forces—namely, "Energien," "System-Kräfte," "Dominanten," and "psychische Kräfte". There is no warrant for postulating psychical forces for plants; the tendril does not long for its support, and the squeal the cabbage gives as we cut it from its stump admits of very prosaic physical explanation; but when one tries with physical and chemical terms to make a physiological equation for the plant's life from day to day, from year to year, we are forced to put in an 'x,' an unknown factor, a *tertium quid;* and Reinke suggests, of course in an elaborate and ingenious way, "for x read '*Dominanten*'". It seems to us merely a matter of spelling. It all comes to this, that Reinke's *religio botanici* and his science are at one in demanding a 'cosmic intelligence' operative not only as "eine intelligente Urkraft" but every day in the 'Dominanten'. "Ich denke mir *mutatis mutandis* die Organismen durch eine intelligente Urkraft hervorgebracht, wie jede Maschine, jedes Kunstwerk die Schöpfung menschlicher Intelligenz ist. Dass dabei die intelligente Urkraft eine Hypothese, eine Bildvorstellung ist, gebe ich ohne weiteres zu."

J. A. T.

Der soziale Optimismus. Von Ludwig Stein. Jena: Hermann Costenoble, 1905. Pp. 261.

Prof. Stein gives us a number of articles contributed to various periodicals, and even newspapers, in which he endeavours to show the application of the Energism of Mach and Ostwald to the philosophy of

culture. He is a *Rechtssozialist*, who is apparently the up-to-date exponent of *Kathedersozialismus*, and seeks to establish an equilibrium in things social by drawing the diagonal between the competing forces of Capital and Labour. The means by which this is to be achieved is the completion of social right on the basis of the existing state. Right is codified might; this is possessed by the state, and, consequently, by it alone can the desired equilibrium be established. The state is in the last instance a projection by man of his organs for the preservation of himself and his race. It is literally the organon, the tool, forged by man in the struggle for existence; but, like all tools, it fashions its fashioner. It becomes a teleological unity, with a tendency for its restraining influences to become mechanical, a set of social escapements, as it were. There ought to be a regular proportion between the accelerating and the restraining elements of society, and, in fact, the ascertainment of the diagonal between progress and prohibition, between social ideal and social conscience is the problem of the present.

Obviously a kind of Socialism to hurt no one, and upon which we are glad to learn that Count Bülow beams. As for Prof. Stein's Optimism, it ignores the Optimism as well as the Pessimism of temperament and confines itself to the species. His universal Optimism is scientifically grounded. Evolution is necessarily optimistic, and Nature herself is manifestly directed to the establishment of equilibrium among forces which are polar opposites. Thus we may look forward with confidence to reconciling that opposition of Labour and Capital behind which lurks the old antithesis of freedom and equality, of individual interests and the interests of the species. Immense importance is attached to heredity. Let men live for generations under the rule of socialised institutions, then will they accumulate solidary race-experiences to be implanted in their descendants as the thought-out problem of times past. In fact, we must aim at making morality instinctive, accepting as axiomatic the capacity for perfection of human nature. As the most sublime ideals were at one time illusions and have hardened into habitual ways of thinking on account of their utility, so illusion and suggestion are to remain the great means of elevating the masses. Surely not deliberately applied? Morality by hypnotism would be as bad as by Act of Parliament, and a dietary of conserve of illusion does not promise to be lastingly palatable. Prof. Stein's Utilitarianism is a little trying. His breezy, almost boisterous, manner suggests the suspicion that after all there is a good deal of temperament about his Optimism. At all events he cannot hope to refute Pessimism and ignore the deeply individual note which it has always struck. The articles are of very unequal value. One or two, although interesting in themselves, are rather slenderly connected with the main theme, for example his defence of Hume as against Kant. Prof. Stein defines himself as an Empiricist regarding the origin, an Idealist regarding the validity of all our universal concepts, particularly of all ideas and ideals.

DAVID MORRISON.

Otto Weininger: Sein Werk und seine Persönlichkeit. Von EMIL LUCKA. Wien and Leipzig: W. Braumüller, 1905. Pp. 158.

The author of *Geschlecht und Charakter* was evidently a man of exceptional ability in some directions, but everything about him is suggestive of an unwholesome prematurity. I have nothing against the subject engaging his attention. The psychology of sex, the problems of sex are important

matters, and the first is unduly neglected; but it is impossible that a final, or even a satisfactory, treatment of the subject can be given by a man of twenty-one, however industrious a student or acute an observer. At that age it is not so very uncommon to discover that sexuality and love are irreconcilable; that love is exclusively a male capacity, while women are only capable of lust, to which they seek to degrade the nobler passion; but most men put off committing suicide until they live long enough to know better, or at least to think differently. The emotional reaction from his subject was too much for poor Weininger. The very account of the "reasons" for his act of self-destruction seem to prove, in the teeth of Herr Lucka's intention, that Weininger was for some time before his death mentally diseased. He appears to have fallen a victim to the dread that he was capable of a sort of philosophical analogue to that sin against the Holy Ghost which has so painfully affected some religious minds. That he was always a sort of morbid person, *glückfremd*, Herr Lucka admits. As for Weininger's theories themselves: His metaphysical basis was laid by Leibniz, Kant and Kierkegaard, accentuating the tragic dualism of the latter. Man and Woman as types are polar opposites: actual men and women are bi-sexual, approximating now more to one side, now to the other. It is only man for whom we must assume a transcendental subject. Woman, and the more so the more she is pure woman, is a mere depravity, nothing real, without any relation to the demands which logic and ethics lay on men. Women are not personalities, not monads, but belong entirely to matter and the non-eternal. They are a creation of man, and their creation was the original sin. Woman is soulless, then, and Weininger forthwith jumps to the conclusion that the present psychology "without a soul" is pre-eminently feminine psychology: an example of his imperfectly motived transitions of thought, pointing to mental disorder. Nevertheless, he concludes, we must acknowledge the man latent in all actual women, and treat them as men, as ends in themselves, not means, which renders sexual intercourse morally impossible. Ultimately there are only duties to oneself, duties of the empirical to the intelligible ego; morality and life are incapable of union. Weininger unites transcendental Optimism with immanent Pessimism. His war-cry is the *Wille zum Wert*. I have no space to touch on his undoubtedly interesting, if exceedingly eccentric, views on other subjects. Possibly Weininger left some things worthy of attention, but they cannot be very numerous. The present book is written, not particularly well, by a sincere admirer and personal friend.

DAVID MORRISON.

Ueber Religionen und Religion. Von Dr. JUL. BAUMANN, Professor an der Universität Göttingen. Langensalza: H. Beyer & Söhne (Beyer & Mann), 1905. Pp. 186.

In his preface the author tells us that all religions are the expression of feelings of hope, and that this attitude of spirit can be reconciled with science. He apparently thinks that his book will contribute to a better understanding on religion; it bears as sub-title *Worte zur Verständigung*. The work may be divided into three parts of nearly equal length. The first supplies a sketch of the different ethnic religions; the second gives an account of the religion of the Old Testament and of Christianity; while the last expounds the significance of religions as well as the nature and foundation of scientific religion. The author thus covers a great deal of ground in small space. His treatment of the subject is for the

most part slight and popular, nor does he follow the lead of the argument with any great rigour. Perhaps Dr. Baumann would have done better in the space at his disposal if he had given a short and connected account of the general phenomena of the religious consciousness. As it is, his history of religions omits much of importance. In the section on primitive religion fetishism is not treated. Under China no mention is made of Tâoism, and in the account of the Roman religion the main principles are not even stated.

In discussing the religion of the Old and New Testament the writer shows a respectable acquaintance with recent critical literature, and his own standpoint is that of the advanced critic. But in dealing with the Synoptic Gospels he is content to report the views of Wellhausen and seldom indicates dissent. It is a token of the somewhat fragmentary nature of the work that the important topic of Paulinism is not treated. As might be expected, Dr. Baumann's conclusions on the nature of religion come before us more as independent reflexions than clear deductions from his history. He recognises that feeling and imagination play a great part in the religious consciousness, but he is one-sided in finding the essence of religion in the feeling of hope. On page 143 he makes the curious mistake of supposing that Prof. James argues from the varieties of religious experience to polytheism as 'the only verifiable hypothesis'. James's statement is much more guarded. Under the head of 'scientific religion' the author develops on a realistic basis a view of God as the ultimate Cause, who by His thought and will brings the world into being. The world reveals God, but is distinct from Him as the work from the workman. It is not suggested that this view raises difficulties. But we are told that this 'scientific religion' lends countenance to the feeling of hope which is the common feature of the religious consciousness.

Dr. Baumann's book is clearly written and readable, and it conveys a good deal of varied information. But it can hardly be reckoned an important contribution to the subject.

G. Galloway.

Psychologie und Erkenntnistheorie in der Religionswissenschaft. Vortrag Gehalten auf dem International Congress of Arts and Sciences in St. Louis. Von Dr. Ernst Troeltsch. Tübingen: J. C. B. Mohr, 1905. Pp. 55. Price 1s. 6d.

Prof. Troeltsch's address begins by explaining why modern German psychology has hitherto been of little service to religious philosophy, and goes on briefly to review and commend the labours of American psychologists in this connexion, and especially holds up as an example of the true and fruitful method in the psychology of religion, *i.e.*, the purely empirical method, the recent masterpiece of Prof. William James. But empirical psychology can throw no light on the problem of the truth and value of religious experience, and the philosophy of religion cannot therefore base itself wholly upon it. It must be complemented by a rational theory of knowledge based on *a priori* principles. The philosophy of religion must in fact base itself on the method of Kant, the synthesis of the empirical and the *a priori*, which method, however, Kant himself failed to carry through in this province. Kant's attempt to restore the religious and ethical values by the device of the practical reason failed to overcome the Spinozistic Monism and consequent Pantheism that are the necessary outcome of the classical doctrine of the universal sway of mechanical necessity in nature. This monism is fatal to true religion,

for it would banish all mysticism, and mysticism is an essential element of religion, which is vital only so long as it aspires towards a God that is other than the mere course of nature and seeks from Him strength to withstand the natural world-process. It is not by separating strictly the irrational empirical and the rational *a priori* that religion can be served, but only by submitting the irrational manifold of religious experience, a confusion of truth and error, to a rational criticism "das nur in dem rationalen Apriori der Vernunft und in der organischen Stellung dieses Apriori in der Bewusstseinsoekonomie überhaupt gefunden werden kann". Only a philosophy of religion thus based on the modern refined empirical psychology and on a "rational" epistemology can undertake to determine the validity of religious experience and critically to regulate the spontaneous productivity of the exuberant religious consciousness.

Whatever view one may take as to the prospects of success of the enterprise here sketched out, one is compelled to admire the honest and courageous attitude of the author in face of these obscure problems, his willingness to accept all the aid that empirical psychology can give, and his resolution neither to let go the essentials of religion nor to avoid the difficulties by a separation of religious thought from all other provinces of human reason.

W. McD.

La Filosofia di Schopenhauer. By Giuseppe Melli. Firenze : Bernardo Seeber, 1905. Pp. 320.

This work, presented unostentatiously without foreword of any sort, consists of eleven chapters on the salient points in Schopenhauer's philosophy, beginning with objective reality and Kant, and ending with '*das bessere Bewusstsein*'. Its value does not lie precisely in its adequacy as a guide to the content and evolution of that philosophy, either by way of analytical exposition, or of critical discussion. The actual references given are very scanty; indeed it is not always clear, without Schopenhauer in Italian at one's elbow, whether the thought expressed is that of the Ascetic of Frankfort, or that of his Florentine disciple. The interest and value of the book lies in the fact that we have the essence of Schopenhauer's thought digested, assimilated and re-expressed in, and as, Melli's thought. The asperities and rugosities of the great Borussian pioneer are here refined and attuned by a serener, humaner and more modest temperament, but with no weakening of the master's passion for truth. The style, too, is similar in its combination of almost slovenly ease with a lucidity and limpidity that makes the book read more like autobiography than metaphysical argument.

Signor Melli has done well to give us this most sympathetic presentment of Schopenhauer's spirit, or, if you will, this *aperçu* of his own philosophy while under the influence of that spirit. There is no nineteenth century philosophy more *gros de l'avenir*, as Leibniz has it,—more capable of a great evolution in the mill of other minds, more fecund in its vision over East and West, than Schopenhauer's. The torch he held up should and will be passed on. But it is the next book by Signor Melli that should be of yet greater interest for us. In that before us we miss the critical note. He does not deal adequately with, he does not recognise, as Prof. Caldwell for instance does, the fiasco between the deeper view of things that lies in *Conor ergo sum*, as compared with *Cogito ergo sum*, and the negative conclusion of negating the will to live. He quotes to us the very words of the Buddha's Four Truths and does not see that the Indian sage, in condemning craving for life as such,

mere quantitative life, built on his foundation a reason for strenuous joy in qualitative perfection of life. He does not, once more, admit that, if it be the basis of moral life to recognise one's self in others, it is illogical to say man has no right "to invoke or hope for aid from any one but himself". He has every possible right. We are, if *solidaires*, not so only by evolution and by sympathy, but also by just claims upon others. But the note that is lacking is just a grip of the full import of evolution.

C. A. F. Rhys Davids.

Received also:—

C. H. Harvey, *The Biology of British Politics*, London, Swan Sonnenschein, 1904, pp. viii, 167.

Prof. E. Morselli, *Le Amicizie di Collegio*, Roma, Albrighi, Segate e C., 1905, pp. xiv, 334.

George White, *Personal Magnetism, Telepathy and Hypnotism*, London, Routledge, 1905, pp. x, 284.

G. Simmel, *Die Probleme der Geschichtsphilosophie*, Leipsig, Duncker & Humblot, 1905, pp. 169.

A. Bastian, *Die Lehre vom Denken*, Berlin, Dümmlers, 1905, pp. 303.

Karl Gebert, *Katholischer Glaube und die Entwicklung des Geisteslebens*, München, 1905, pp. iv, 82.

S. Krauss, *Théodule Ribots Psychologie*, Jena, Costenoble, 1905, pp. ix, 170.

R. Avenarius, *Der Menschliche Weltbegriff*, Leipsig, Reisland, 1905, pp. xxiv, 134.

Kurt Geibler, *Die Kegelschnitte und ihr Zusammenhang durch die Kontinuität der Weitenbehaftungen*, Jena, Schmidt, pp. viii, 201.

Ernst Schrader, *Elemente der Psychologie, des Urteils*, Leipsig, J. A. Barth, 1905, pp. viii, 222.

Richard Wallaschek, *Psychologie und Pathologie der Vorstellung, Beiträge zur Grundlegung der Aesthetik*, Leipsig, J. A. Barth, pp. iv, 322.

Schriften der Gesellschaft für psychol. Forschung, Heft 15 (iii. Sammlung), Richard Baerwald, *Psychologische Faktoren des modernen Zeitgeistes*, Paul Möller, *Die Bedeutung des Urteils für die Auffassung*, J. A. Barth.

Beiträge zur Psychologie der Aussage, mit besonderer Berücksichtigung von Problemen der Rechtspflege, Pädagogik, Psychiatrie und Geschichtsforschung, 2 Folge, 2 Heft, Leipsig, J. A. Barth, 1905, pp. 154.

Alfred Fouillée, *Le moralisme de Kant et l'amoralisme contemporain*, Paris, Félix Alcan, 1905, pp. xxiii, 375.

Fritz Medicus, *J. G. Fichte, Dreizehn Vorlesungen gehalten an der Univer. Halle*, Berlin, Reuther & Reichard, 1905, pp. viii, 269.

Frederic Harrison, *The Herbert Spencer Lecture*, Oxford, 9th March, 1905, Oxford, Clarendon Press, 1905, pp. 30.

Eduard Spranger, *Die Grundlagen der Geschichtswissenschaft, eine erkenntnistheoretisch-psychologische Untersuchung*, Berlin, Reuther & Reichard, 1905, pp. xi, 146.

L. Couturat, *L'algèbre de la logique* (*Scientia*, No. 24), Paris, Gauthier-Villars, 1905, pp. 97.

Karl Marbe, *Erzeugung kurzdauernder Lichtreize mit Hilfe des Projektionsapparats.*

Henry J. Watt, *Über die Helligkeit einmaliger und periodisch wiederkehrender Lichtreize*, Bonn, Martin Hager, Separatabdrücke aus dem *Archiv für die ges. Physiologie*, Bd. 107.

IX.—PHILOSOPHICAL PERIODICALS.

The British Journal of Psychology. This journal, published under the editorship of James Ward and W. H. R. Rivers and with the collaboration of W. McDougall, C. S. Myers, A. F. Shand, C. S. Sherrington, W. G. Smith and (since the third number) A. Kirschmann, is to be welcomed as a sign of the vigorous and flourishing condition of psychological studies in England. If future numbers succeed in maintaining the high level of interest of the three numbers which have at present appeared, the new journal bids fair to take its place worthily among its older contemporaries on the Continent and in America.—Vol. i., part 1, January, 1904. 'Editorial.' [Explaining the purpose of the journal, *viz.*, to be 'an English journal devoted exclusively to Psychology in all its branches'.] **James Ward.** 'On the Definition of Psychology.' [A definition of Psychology as 'the science of individual experience' is developed by means of a critical examination of the fundamental principles of Aristotle's and Descartes' psychologies. Finally it is argued that analytic must precede genetic Psychology, on the principle that the unknown can only be explained on the analogy of the known.] **C. S. Sherrington.** 'On Binocular Flicker and the Correlation of Activity of "Corresponding" Retinal Points.' [A record of experiments showing that the singleness of binocular vision is due to a *psychical* synthesis of uniocular sensations developed independently of each other.] **J. Lewis McIntyre.** 'A Sixteenth Century Psychologist, Bernardino Telesio.' [An account of Telesio's *De rerum natura.*] **W. McDougall.** 'The Sensations Excited by a Single Momentary Stimulation of the Eye.' [Account of experiments showing that the responses to a single momentary stimulation are of two kinds: (*a*) The primary response consists 'in a series of pulses of sensation of diminishing intensity rapidly succeeding one another'. (*b*) The secondary response consists in a 'steady persistent after-image' following after a brief interval on the primary response. 'Bidwell's ghost' is not identical with this after-image, but is merely the *last* of the pulses of the primary response, the intermediate pulses being inhibited by the greater brightness of the first pulses. Against v. Kries and Bidwell it is shown that the 'ghost' may be red. All these phenomena are complicated by the different behaviour of rods and cones, *e.g.*, the excitation of the former is shown to take $\frac{1}{18}$ second longer in developing a conscious sensation than the excitation of the latter. From this it is argued that separate physiological processes are involved.] **W. McDougall.** 'Note on the Principle underlying Fechner's "Paradoxical Experiment" and the Predominance of Contours in the Struggle of the Two Visual Fields.' [Though the cortical paths conducting excitements from the two retinæ to the brain are not identical, yet they may be so related that under certain conditions the one may withdraw energy from the other, or rather appropriate a larger share of the total energy set free by the excitation.] Report of Proceedings of the Psychological Society, February, 1902—October, 1903.—Vol. i., part 2, June, 1904. **C. S. Myers.** 'The Taste-

names of Primitive Peoples.' [Results of a questionnaire on the subject addressed to Europeans resident among a number of uncivilised races.] **W. H. Winch.** 'Immediate Memory in School Children.' [Series of experiments showing that visual memory is capable of improvement with practice and age, and that good memory and intellectual proficiency generally go together.] **R. Latta.** 'Notes on a Case of Successful Operation for Congenital Cataract in an Adult.' **W. McDougall.** 'The Variation of the Intensity of Visual Sensation with the Duration of the Stimulus.' [Account of a new method of determining the action-time of light of a given intensity, *i.e.*, of the duration of its action on the retina necessary to produce the maximum possible of sensation. The results obtained suggest the true interpretation of the Talbot-Plateau law. Kunkel's determinations of the action-times of coloured lights criticised.] Proceedings of the Psychological Society, January, 1904—March, 1904.—Vol. i., part 3, January, 1905. **Norman Smith.** 'Malebranche's Theory of the Perception of Distance and Magnitude.' [Malebranche's importance as forerunner of Berkeley not sufficiently appreciated. His theory of the perception of magnitude in some points better than that of Berkeley.] **F. N. Hales.** 'Materials for the Psycho-Genetic Theory of Comparison.' [Attempt at a classification of the methods employed to express comparison both in gesture-language and in spoken languages.] **W. G. Smith.** 'A Comparison of Some Mental and Physical Tests in Their Application to Epileptic and to Normal Subjects.' [An account of experiments on inmates of the London County Asylum, Claybury, Essex, in different stages of dementia.] **Mary Whiton Calkins.** 'The Limits of Genetic and of Comparative Psychology.' [Genetic and comparative Psychology must be strictly distinguished as differing not so much in method as in subject-matter. Genetic psychology studies consciousness in its development; hence it cannot accept the Humian account of consciousness, but requires a "Self" as unit of development. The main problem of comparative psychology is to find a criterion of consciousness. Its scope is shown to be as wide as animal life.] **C. Spearman.** 'Analysis of "Localisation," Illustrated by a Brown-Séquard Case.' [Movement-sensations are shown to have 'no present direct influence upon our power of localising'. Localisation depends on two distinct kinds of excitation, termed 'articular' (= 'revealing the inclinatory angles of the joints') and 'segmental' (= 'revealing the fixed positions of two joints relatively to each other').] Proceedings of the Psychological Society, June, 1904.

Revue de Métaphysique et de Morale. 13e Année, No. 2, March, 1905. **Sully Prudhomme.** 'Définitions fondamentales (Vocabulaire logiquement ordonné des idées les plus générales et les plus abstraites).' ["Je me suis proposé, dans ce travail, de prévenir tout malentendu sur le sens de certains mots usités dans la science et dans la philosophie."] **E. Le Roy.** 'Sur la logique de l'invention.' [An attempt, on pragmatist lines, to define the fundamental characteristics of creative thought.] **L. Couturat.** 'Les principes des mathématiques (suite).' [Couturat in this concluding article sums up as follows: 'La philosophie des mathématiques de M. Russell, que nous avons essayé de résumer et de commenter dans ces pages, n'est nullement un brillant paradoxe, une fantaisie individuelle ou une mode intellectuelle éphémère, mais l'aboutissement, le couronnement nécessaire de toutes les recherches critiques auxquelles les mathématiciens se sont livrés depuis un demi-siècle'.] **R. Delacroix.** 'Myers: la théorie du subliminal.' **E. Delsol.** 'Une nouvelle tentative de réfutation de la géométrie générale.' Livres nouveaux, etc.

ARCHIV FÜR DIE GESAMTE PSYCHOLOGIE. Bd. iii., Heft 2. **G. F. Lipps.** 'Die Massmethoden der experimentellen Psychologie.' [An elaborate discussion, in part experimental, on the lines laid down in the author's *Grundriss d. Psychophysik.* The paper was finished before the appearance of Müller's *Methodik*, which is accordingly noticed only in footnotes.] Besprechungen. Referate. Bd. iii., Heft 3. **W. Specht.** 'Ueber klinische Ermüdungsmessungen.—I. Die Messung der geistigen Ermüdung.' [Experiments made, under Kraepelin's direction, by the method of addition. Work-curves of normal and abnormal subjects.] Bericht. **F. M. Urban.** 'Die Psychologie in Amerika'—I. Bd. iii., Heft 4. **L. Treitel.** 'Haben die kleinen Kinder Begriffe?' [True concepts are developed late; up to the fifth year the child designates different objects by the same name.] **C. G. Jung.** 'Ueber hysterisches Verlesen: eine Erwiderung an Herrn Hahn (pr. Arzt in Zurich).' **R. Hahn.** 'Ueber sinnvolles Verlesen: Antwort auf die Erwiderung von Dr. Jung.' **W. Peters.** 'Die Farbenempfindung der Netzhautperipherie bei Dunkeladaptation und konstanter subjektiver Helligkeit.' [Repetition, with modifications, of Hellpach's work. Hellpach's outermost complementary zone is replaced by a zone which is neither absolutely insensitive to colour nor represents the minimum of colour sensation.] Besprechungen. Referate.

ARCHIV FÜR SYSTEMATISCHE PHILOSOPHIE. Bd. x., Heft 4. **Chr. D. Pflaum.** 'Die Aufgabe wissenschaftlicher Ästhetik.' [Scientific Aesthetic defined as the knowledge of the purely intensive valuations of the contents of the spirit—"intensive" meaning the value of something purely for its own sake. Value never the property of an external object but of subjective nature. Historical matter of interest: seeks to rest to some extent on the authority of Kant.] **Richard Skala.** 'Über die Verwechslung des sinnlich Angenehmen mit den Kunsteindrücken und einige andere Folgen der sogenannten empirischen Ästhetik.' [An attack on the "objektivistische Betrachtungsweise". Artistic emotions directly inspired by Nature, and cannot be explained by Association, as Fechner does, for they must first be experienced before they can be associated.] **Bruno Stern.** 'Gerechtigkeit.' [An exposition of Wilhelm Stern's genetic explanation of the concept. Arises from the community of interest of sentient reality to protect itself against injury inflicted by unconscious nature.] **Hermann Staeps.** 'Das Problem der Willensfreiheit vom Standpunkt des Sollens.' [Based on Windelband. Alongside the purely theoretical and deterministic point of view, human actions fall under judgments of value or norms. In the latter case freedom is the moral task of life. One must act according to the norm. By faith in the power of the norm one becomes free.] **Rudolf Goldscheid.** 'V. Jahresbericht über Erscheinungen der Soziologie in den Jahren 1899-1904.' Bd. xi., Heft 1. **Kurt Geissler.** 'Über Notwendigkeit, Wirklichkeit, Möglichkeit und die Grundlagen der Mathematik.' [No necessity without some definite being. Necessity of Mathematics rests upon the reality of its foundations, but this reality requires for its elucidation and sufficing applicability to Mathematics the possibility of certain doctrines, *e.g.*, the infinite, etc Examination of the conclusiveness of certain important mathematical expositions.] "Bewusstsein und Wirklichkeit." Aus dem Nachlasse von **A. Gurewitsch. B. Lemcke.** 'De lege motus.' [Rest is the boundary of motion.] **Franz Graf Marenzi.** 'Der energetische Mutualismus: Philosophische Aphorismen.' ["Das Sein Wird, das Werden ist." The absolute, energetic, predicative world, something which is not presented to us and which we cannot think, but of which we have as it were

a premonition.] **James Lindsay.** 'Theistic Idealism.' [Hegelian Idealism a good foundation, but an unsatisfying superstructure. The theistic unity of the world must maintain the relative independence of the self and the world while seeking to unify them. It is constituted by the ideals of the Absolute entering into us and being reaffirmed by us as our ideals. Perfect Personality in God alone.] Jahresbericht. **C. Bos.** 'La Philosophie en France, 1904.'

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE UND SOZIOLOGIE. Jahrgang xxviii., Heft 4. **Jos. Klem. Kreibig.** 'Über ein Paradoxon in der Logik Bolzanos.' **Paul Barth.** 'Die Geschichte der Erziehung in soziolog. Beleuchtung, iv.' [Hellenic states by middle of fourth century composed no longer of ranks, but classes. With increase of wealth and civilisation new type of individualistic culture—the encyclopædic—arises and is organised. It aims rather at spiritual enjoyment than political capacity. Adopted by Rome.] 'Zu Kants und Lockes Gedächtnis.' [Locke's service to philosophy, his psychological investigation of the process of knowledge. His practical services in the cause of education, politics, religious freedom, almost of more importance. Kant's services confined to philosophical theory. Both agreed that knowledge of the transcendent world might be an extension of our empirical knowledge, but not a substitute for it.] Besprechungen. Jahrgang xxix., Heft 1. **Hermann Wolff.** 'Atomistik und Energetik vom Standpunkte ökonomischer Naturbetrachtung.' [Assumption of molecules and atoms an application of the epistemological principle of the conservation of the individuality of bodies which proves so economical in the comprehension of the world. With this assumption concept of individuality can be applied in the case of material substances, but not in every case for energies.] **Hermann Planck.** 'Die Grundlagen des natürlichen Monismus bei Karl Christian Planck.' [The law of identity governs at once natural process and the activity of spirit. Being not susceptible of explanation, only evolution. By force of the real law of identity, the world process takes place between the mutually related poles of concentration and dissipation, and pure thought, working on the basis of sense-impressions, is the spiritual repetition of the natural process. Morality an expression of the universal striving towards concentration, for it enjoins action in harmony with the whole. Practical deduction in favour of Socialism.] **Gerhard Stosch.** 'Die Gliederung der Gesellschaft bei Schleirmacher: Ein Beispiel der genetisch-konstruktiven Klassifikationsmethode.' [Schleirmacher's articulation of society detailed and determined from the point of view of Wundt's threefold division of the methods of classification.] Besprechungen (contains a review of Mr. Bertrand Russell's *Principles of Mathematics*).

X.—NOTES AND CORRESPONDENCE.

To the Editor of "Mind," London, England.

Dear Sir,

The importance of the subject and the additional interest attaching to it by reason of the recent death of Mr. Spencer prompt me to send you the subjoined correspondence.

Upon 12th February, 1902, I sent to Mr. Spencer a communication which (omitting a few introductory remarks) is as follows :—

"More than any writer that I know of, you employ in your works the words 'induction' and 'deduction,' which, in the second volume of your *Principles of Ethics*, page 54, you characterise as 'antithetical modes of reasoning'. Now, are there *two* fundamental unlike modes of reasoning? I think not. The process of reasoning seems to me to be the same throughout. As you yourself say in your *Principles of Psychology*, volume ii., page 115, reasoning is 'the indirect establishment of a definite relation between two things,' and then, after asking by what process the relation is established, you say : '*There is one process, and only one*'. Now it seems to me that in so far as 'induction' is antithetical to 'deduction' it is not reasoning at all, but *verification ;* and it seems to me that you frequently use the word 'induction' as the equivalent of verification, or fact-gathering. You repeatedly say : 'as inductively verified'. On page 55, volume ii., *Principles of Ethics*, you say a certain truth cannot be 'established *a posteriori*'. Does not this mean that it cannot be *proved as a fact ?* Now, if 'induction' does not mean this, and is a mode of *reasoning*, wherein is it 'antithetical' to 'deduction'? You say (*Principles of Psychology*, vol. ii., p. 111) that when we infer 'all' from 'many' we have reasoned 'inductively,' and that we reason 'deductively' when we infer 'one' from 'all'. It seems to me that this is not so. By reason we infer the unperceived, or unknown, from the perceived, or known. It is an extension of perception. A relation is many times perceived or experienced. An association in the mind is thus established between the terms of this relation. When, therefore, one term alone is *perceived* the other is *inferred*, and this constitutes reasoning. If the relation is necessary, the inference is irresistible. For instance, I see one end of a rope. The inference that it has another end cannot be resisted. On the other hand, a horse between shafts comes into view from behind some intervening object. I infer that he will be followed by a vehicle, but though the inference is strong it is not impossible to resist it. Now in both of these instances I have reasoned, but in neither of them have I inferred one from all, or all from many. Take another illustration. I *perceive* that A and B are equal. I also *perceive* that B and C are equal. I *infer* (irresistibly) that A and C are equal. This is surely reasoning, but according to the definition given it is neither deduction nor induction. Hence the two alleged modes of reasoning do not cover the ground. And it may be easily shown, I think, that the division of the ground which they do cover

is not a substantial division at all. If I induce 'all' from 'many,' I really am but *inferring* that a relation many times perceived will be found to exist in all *unperceived* cases. But suppose, instead of saying that the relation exists in all cases, I say it will be found to exist in a *single* unperceived case; is this induction, or deduction? If the latter, wherein does such a deduction differ from induction? Surely, by the same process I reach the conclusion 'all' as I do the conclusion 'one more'. But will it be said that deductive reasoning is always from *all* to one? If so, I ask what is meant by all, as thus used. How can we ever know all? The following is given by writers on logic as an example of deductive reasoning:—

All men are mortal.
A is a man.
Therefore, A is mortal.

But the conclusion that A is mortal is really not a deduction from 'all,' but from 'many'. By 'all' we only mean all we have *known*, *i.e.*, *many*. The conclusion, therefore, that A is mortal is an *induction* to the extent that it goes, and if we enlarge the conclusion so as to include B, C, D, E, F, etc., we get a *generalisation*, which is the same thing as an induction. Thus it turns out that our supposed *de*duction was only a limited *in*duction. But give to the word 'all' in the above syllogism its full literal meaning, what is to be said of the conclusion? Is it reached by *reasoning*, or not; and if so, what kind of reasoning? Of course if by 'all' I mean literally *every one*, I have included in the major premise the conclusion 'A is mortal,' for A is but one of those going to make up all. In this aspect of the matter it may be said that the conclusion is not reached by reasoning at all. It is but the expression of part of that which was already perceived or known. But in another view the conclusion is an inference, but not one, I think, which is correctly described by saying that it is a deduction from 'all' to 'one'. The conclusion that A is mortal expresses something which is involved in (inferred from) the premises, but which is not expressed in either of them. When I say that all *men* are mortal I do not say that A is mortal, for it has not yet been shown that A is a man; and when I say that A is a man I, of course, neither express nor imply anything as to his mortality. Hence the conclusion that A is mortal is gathered partly from one and partly from the other proposition. I put the two together and draw the conclusion. In this view the conclusion is reached by reasoning; but is it reached by any different process than that by which I reach any other inferred piece of knowledge? I think not. It is, of course, exact and necessary, and in that respect unlike many other reasoned out conclusions; but all inferences are reached in the same way, and the line of distinction is not that, in the one case, 'one' is deduced from 'all,' and in the other 'all' is induced from 'many'. When I say that A and C are equal because both are equal to B, I have drawn a necessary conclusion, which is as much a deduction as the conclusion that A is mortal, but it does not consist in inferring 'one' from 'all'. It merely *happened* that in the illustration given above the words 'all' and 'one' were employed. The illustration employed has resulted in carrying into the definition an immaterial element, which has had the effect of unduly and improperly narrowing it. Other illustrations, as we have seen, show that the process may be carried on without the elements 'all' and 'one' being at all involved. And lumping the illustrations we see that the process in all cases consists in *inferring* the *unstated*, or *unperceived*, from the *stated*, or *perceived*. Of course it is not necessary that the inference should always be from the *perceived:* it may be drawn from a given proposition, or a proposition inferred from perceptions or from general

propositions which are the 'net result' of unvarying perceptions both individual and ancestral—axioms.

"The above views find considerable support, I think, in the confusions and contradictions which are frequently found in works wherein it is assumed that there are two essentially distinct modes of reasoning. We find the '*a priori*' method condemned as 'unsafe,' and the '*a posteriori*' method praised as 'sound'. But, surely, if 'deduction' consists only in expressing of 'one' that which has been proved of 'all,' it is a *safe* method, if nothing else; which cannot be said of a method by which we infer *all* from *many*. Of course, in thus praising the inductive method, these writers are not really speaking of *reasoning* at all, but of *observation*, or *experiment*. In condemning the '*a priori*' method they are really condemning the so-called *inductive* method, or the method of *inference*, as distinguished from the method of *observation*."

On the next day (13th February, 1902) I added to my letter the following postscript:—

"Last evening, after dictating the foregoing, I read chapter vii., volume ii., *Principles of Psychology*, and was surprised to find (what I had forgotten) that you had expressed therein views which would seem to render my criticism pointless. You clearly show in that chapter that so-called induction and deduction cover but a small portion of the ground, and that the distinctions between them are unsubstantial. Nevertheless, this was not the purpose of the chapter, and notwithstanding what you say there you do assume and assert generally throughout your works that there is a radical distinction between induction and deduction—that they are 'antithetical'. This surely is not so, if, as you say in the chapter referred to, the distinction is purely a *numerical* one. And this suggests that in most cases the proportion of perceived to inferred relations cannot possibly be known, and hence it cannot be known whether the inference is inductive or deductive. Nor is the strength of the inference determined by the *number* of perceptions, nor by the number of new cases which a perceived relation is made to cover; the definiteness and vividness of the relation experienced are important factors. In the abstract sciences a definite relation once clearly perceived is necessarily seen to exist with respect to all other possible cases. On the other hand, a certain relation may have been experienced countless times without producing any tendency in the mind to extend it to a single new case; and this for the reason that notwithstanding the number of times the relation has been perceived, it is known, or *conceived*, to be not necessary. Thus it seems to me that the distinction between induction and deduction everywhere breaks down, and I think the conclusion at which I have arrived in regard to them finds no little support in the fact that gentlemen of my profession, whose chief business it is to reason—and some of them, notwithstanding their limitations, are very powerful and acute reasoners—never employ the words 'deduction' and 'induction,' nor any words having the same meaning, whereas the *single* term *inference* is constantly used by them. I was impressed, on reading chapter vii. last evening, with the notion that while you proved that induction and deduction, in so far as they are reasoning at all, are really the same thing, yet you did not seem to be fully conscious of this, and went on your way still carrying with you the current idea that they were radically different."

In response to the foregoing Mr. Spencer, on 1st March, 1902, sent me the following note:—

"There is much force in the objections you make; but I am nearly eighty-two, and a confirmed invalid, and you must therefore kindly excuse me if I do not go into the matter".

Further thought upon the subject has furnished me with many additional grounds supporting my contention, but I will not extend this communication by a statement of them.

Respectfully yours,

L. A. Redman.

May I be allowed to make a brief statement in reference to the article by Mr. Knox in the last number of Mind? This article purports to criticise my views on certain ultimate questions. The discussion of such final difficulties, and the attempt to solve them, is naturally to be found mainly in the latter part of my book. On the other hand, in the above article I see no reference to any page beyond the first quarter of the volume, and I discover no acquaintance with anything that comes later. To speak in general, where I have raised a difficulty and offered a solution, my discussion is not condemned as worthless (as perhaps it is), but seems taken as if it possessed no kind of being.

Out of several instances I will point to the most obvious. I published in Mind, N.S., No. 20, an examination of the nature of Contradiction. This (with omissions) was reprinted some eight years ago in my book, and, under the heading "Contradiction and the Contrary," its existence is visible in the Table of Contents. But in the article in which Mr. Knox now controverts my view of Contradiction, I find no reference to that which presumably he must know is my professed discussion of the topic. Its contents and the very fact of its existence seem taken as things which are nowhere in the world. See especially pp. 213 and 218.

I could adduce other instances of what appears to be the same procedure, but one perhaps is enough. And to myself, though possibly not to others, the whole thing is inexplicable. I am not, I hope, under much illusion as to the defects of my volume, and on this special subject it will be a disappointment to me if it has to contain my last word. On the other hand, I perhaps need explain no further why, without denying the merits of Mr. Knox's article, I have been unable to find in it much which concerns me personally.

F. H. Bradley.

LEWIS CARROLL'S LOGICAL PARADOX.

In consequence of press errors the following corrections must be made in the article on the above subject, which appeared in Mind, No. 54, p. 292:—

Strike out the words 'The fallacy is in any case a merely verbal one' in p. 293, l. 32, and after l. 31 add the following:—

This absurdity cannot be avoided by changing the form of the supposed consequent of 'Carr is out' to the form 'If Allen is out, *when Carr is out*, Brown is in': for we should only get this: 'If Carr is out, then if Allen is out and if Carr is out, Brown is in'. That is, 'Brown is in if Allen is out and if Carr is out, provided Carr is out'. But the condition introduced by the word 'provided' is included already in the preceding and is therefore secured. Hence the statement is equivalent to 'Brown is in if Allen is out and if Carr is out'. This comes to the true interpretation, given above, of (v.), which is incompatible with the false *reductio ad absurdum*.

W.

NOTE ON LOGICAL EXISTENCE.

Mr. MacColl, in the last number of MIND, asks where the error lies in the following reasoning: "It is maintained by Boolian logicians that always $0A = 0$. Let A equal 'existent'. Then, since 0 equals non-existence, 'every non-existence is existent'. But this is absurd. Hence $(0A = 0)$ is not always true." The error consists in *confusing* (1) *the term 'existent' with the existence of things denoted by the term, and* (2) *the term* 0 *with the non-existence of things denoted by it.* Mr. MacColl says: "Let A = 'existent,'" and in saying this he thinks he has secured the existence of A things. But the presence of this term 'existent' does not imply the existence of things denoted by the term, for in a generalised Logic the universal affirmative, as Venn shows, must be taken to denote 'Every S, if there are such things, is a P, if there are such things'. 'Existent' cannot be a term, and at the same time declare that things exist corresponding to it. Similarly 0 cannot denote both a term and the non-existence of things corresponding to it.

To put the same thing in a slightly different form. With two *terms* 0 and 'existent' the universe of discourse is necessarily divided into four compartments: 0 not-existent, 0 existent, not-0 existent, not-0 not-existent. Now it is not justifiable to identify all the existing things in the universe with the second and third of these compartments, for it is possible that non-existents may here exist: all depends upon what destruction the premises effect. For instance, if the premises destroy the first three compartments, only the fourth can exist. But Mr. MacColl, when he says 'Every 0 is existent,' does identify the second and the third compartments with all the existing things in the universe. Then he takes the second compartment as erased, and so arrives at a self-contradiction.

It is certainly self-contradictory to say that every empty compartment is an occupied compartment, but it is not self-contradictory to say $(0 \prec A)$, whether A stands for 'existent' or for any other term.

A. T. SHEARMAN.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—PRAGMATISM *V.* ABSOLUTISM (II.).

By R. F. Alfred Hoernlé.

In the first half of this paper I have tried to give an account of Mr. Bradley's Absolutism, and to point out what seem to me the insuperable difficulties under which it labours. I now proceed to an examination of Pragmatism, which, for the purposes of this paper, I take to be represented by the writings of Prof. James and Mr. Schiller.

To give a clear and connected account of Pragmatism is not easy, for no systematic statement of it is anywhere to be found. Its defenders have not come before the world with a ready-made and fully-developed doctrine, thought out into all its consequences and tested in all its applications. It is just the tentative and provisional nature of many expositions of Pragmatism which makes it hard to grasp its meaning unequivocally. It seems to change, Proteus-like, under our hands, just when we think we have held it fast and pinned it down. The very formulations of its doctrines are perplexingly numerous, and not always, on the face of them, consistent with each other. I must, therefore, leave the reader to judge whether my account of Pragmatism does justice to it or not.

The best way of approaching Pragmatism seems to me not to plunge straightway into an attempt to unravel and harmonise the various accounts of it with which we are presented, but to consider first, in a general way, the problem about the solution of which the Pragmatist differs from his opponents. The problem is that of the *nature of knowledge and truth.* A consideration of the difficulties of this problem

will help us to understand better the significance and meaning of the Pragmatist theory of truth.

The foremost characteristic of truth—on this point the plain man and the philosopher, as a rule, agree—is that it has a *determinate* nature of its own, which is independent of arbitrary caprice and unalterable by subjective whim and fancy. Unless truth has a determinate nature, which is not made by me or by my knowing, but merely revealed to me in knowing, there is nothing for me to know. Incessant change, without rule or reason, and lawless confusion defeat all attempts at knowledge. That is the reason why Plato turned scornfully away from the world of Becoming and Change to the world of Being, to the Ideas which remained eternally self-same and immutable, and thus offered a definite goal to the mind straining after knowledge. But how, we are naturally inclined to ask, can truth have a determinate nature, unless it remains wholly unaffected by the vagaries of our minds? We tumble about in error, illusion and prejudice which spread a veil before our eyes and allow us but a dim and discoloured vision of the light. That this very meandering in the labyrinth of error should have any positive relation to the nature of truth seems incredible. How, indeed, can the tortuous tracks that we follow on our voyage of discovery affect the nature of the object of which we are in quest? And thus we come to think that the ways in which we discover truth afford no criterion or guarantee of truth. And perhaps we shall express this 'independence' of truth by saying: Truth is truth whether we know it or not. It was truth before we knew it; it is truth as long as we know it; it will remain truth when we shall have ceased to know.

And it is easy to back up this argument by concrete examples. There was a time when men thought that the sun moved round the earth and that heat was an imponderable fluid. Now we hold that the earth moves round the sun and that heat is a state of molecular motion. Is it reasonable to assume that the sun has changed its course or heat its nature because we have changed our views?

And thus we seem driven to the conclusion that all progress in knowledge is an alteration *in us*, a subjective change, leaving the object wholly unaffected and 'independent'. Nowadays this position is being steadfastly maintained by writers of Mr. G. E. Moore's school. A few years ago most philosophers would have fought shy of it, as involving all the difficulties of 'Realism' and 'Dualism,' and as making any intelligible theory of knowledge impossible. And, in-

deed, many arguments may be brought against the above view. Before our modern theories about the solar system and the nature of heat were discovered, the geocentric theory and the fluid theory *were taken as the truth* in exactly the same sense in which we regard our modern theories as true. The views which we have discarded fulfilled exactly the same function in the scientific world-scheme of our forefathers which our views fulfil in our scheme. When they said: the sun goes round the earth, or heat is an imponderable fluid, they *meant* what they said. Reality, to them, was such that these judgments were 'true' of it. Since then wider experiences and a better understanding of the old ones have made our world different, and led us to adopt different theories. And, as measured by the views, which now we regard as true, the 'truths' accepted in the past have become errors, and are condemned by us as 'subjective' and as 'in conflict with the facts'. But we must not forget that the 'facts,' which we thus oppose to false 'theories,' are the facts *as we know them, as our theories represent them to be.* And though, no doubt, we claim for our views greater truth than for those of earlier generations, they do not for all that cease to be 'ours'. And though they are to us *more* than merely subjective, we cannot refuse to acknowledge the possibility that some day, as we attain to better insight, the truths that now hold the field may, like their predecessors, be denounced as 'merely subjective' and 'error' in comparison with some view which will then appear true. Nor need Scepticism be the inevitable outcome of thus admitting development into truth. We may take comfort from the fact that we can only condemn a view as false in the light of one that is truer, and that the better view must contain and do justice to that grain of truth which the false view must have possessed, because otherwise it could never have been accepted as true.

But it may be said, if you admit development into truth, what becomes of its 'independence,' of its 'determinate' nature, of all that enabled us to appeal to it as a standard and an authority, and to lay down the law as to the way in which we *ought* to think logically, however our thoughts might be swayed psychologically by all sorts of influences? There is in 'truth' an element of compulsion to which we submit, a necessity which we do not arbitrarily make or alter, but which we obey.

But to this it may be replied: the necessity is a necessity of our own thought, or our own experience; it must not be sought in any compulsion laid upon thought or experience

by anything other than its own nature. If, *e.g.*, we adopt Euclid's conception of space, then our whole geometrical reasoning is determined by our initial assumptions, and any conclusion not in accordance with those assumptions is thereby shown to be false.[1] Or, if we think we have reason to discard Euclid's space-concept and to put another one in its place, we again lay upon ourselves a necessity to think in a certain way, if we wish to think 'truly'. And the case is much the same, when, in Science, we accept a certain situation or certain 'facts' as 'given,' and proceed to understand them and to form a theory about them. This must not be misunderstood, as if it meant that a theory was but an idle reduplication or description of the facts, leaving the facts as they were before. Reflexion never is such an empty excrescence, it never leaves that which it reflects on unmodified. It develops what it starts with, it helps us to understand it better, and, in this sense, it may be said that a true theory is the true fact, and that facts are the end and not the beginning of knowledge. But, admitting all this, it is yet true that reflexion, though it develops the given basis, also *depends on that basis* for the justification of its developments. And thus here, too, we get an element of 'necessity,' and it is in fact to this element that we must look for a possibility of reconciling the apparently conflicting claims, (1) that truth must be independent of our knowledge and possess a determinate nature; and (2) that it must develop as our knowledge develops. What we are apt to misinterpret as the 'independence' of truth is the fact that, in advancing from lower to higher levels of knowledge, we feel a necessity to make the advance along certain lines, and conversely, that looking back from the higher to the lower, we find the result implicitly contained already in the basis from which we started, much as the conclusion is contained in the premisses and yet marks an advance.

But, even so, one fundamental difficulty yet remains. The idea of an infinite process is one against which our minds instinctively protest. Development is a process, but we refuse to believe that it will go on for ever, and we prefer to regard it as the gradual realisation of a perfect and ideal state. Our knowledge is still in the developing stage: we meet with cognitive processes and the results or products of those processes, called 'truths'. And these truths, as we have seen, though they owe their nature and existence to the inherent law and necessity of the process, yet are in no

[1] Unless, that is, we prefer to modify our assumptions.

case final, but presently are, as it were, dissolved again, and merged in a wider result. But is this alternation of process and result, striving after an end and realisation of that end, to go on for ever? Do we not try to escape from the prospect of a never-ending journey by setting up the ideal of knowledge perfected in the solution of all problems, the satisfaction of all doubts and a pure vision of reality?

No doubt we have such an ideal, but what place has it in our lives? Or rather: What is the significance of our imperfect, struggling, erring lives in the light of that ideal? It is here that we seem to come upon a fundamental antinomy, a *mur infranchissable* against which all philosophical speculation seems, in the end, to run up. It is easy to say: *When* we shall have attained to perfect knowledge, all error will have disappeared. That puts the ideal in the future and gives to our lives an infinite significance as the process by which the ideal is ever being realised. But, as against this, let us recall what was said above about the development of truth in such a way that the higher truth always contains and includes the lower, and, in fact, may be said to have been present already in the lower. If so, must we not say that the ideal is real, in this sense, even here and now in our imperfect knowledge, and that it is only our limitations and our narrow point of view which make it appear to us as 'not yet realised'? And, if this conclusion is sound, must not all our efforts after its realisation appear meaningless and insignificant from the view-point of the ideal, if that ideal is real even now? We experience something of the same difficulty whenever we succeed in solving a problem. Once the solution has been found, the process by which it was achieved, with all its false starts, errors, disappointments, corrections, appears to fall *outside* the final result, to have no essential connexion with it, to be like the scaffolding which is thrown aside as soon as the building is finished. Similarly, if perfect knowledge, which to us is an ideal, is at the same time somehow *more* than an ideal—and this, surely, is what Absolutism as usually interpreted implies—our efforts after perfection are meaningless and absurd, as falling within a whole already perfect. The points of view of the Absolute and of the Appearances are, as I tried to show in the first half of this paper, irreconcilable. Or as applied to Truth and Knowledge: If truth is truth always and for ever, whether we know it or not, what is the significance of knowledge? If things are what they are, whether we are conscious of them or not, what is the meaning of this idle mirror? On the other hand, if truth is not found outside knowledge, or

reality apart from experience, and if experience involves process and development, must not reality share the character of experience?

The sole object of this somewhat prolonged digression into the general nature of knowledge and truth has been to get the right point of view for the understanding of Pragmatism. Pragmatism frankly takes its stand on human experience, as we know it, with a certain accumulation of 'truths' behind it as the results of past efforts to know, and with problems before it to solve, and an ideal of complete knowledge to achieve. And from this point of view Pragmatists attempt to define the nature of Truth.

In the first place it appears that truth is sought *as an end*, and that, therefore, like other ends it must answer to a demand, satisfy a desire. And thus the Pragmatist is led to inquire how the demand for truth manifests itself, and how we proceed to satisfy it.

This takes us straight to the central doctrine of Pragmatism, which I take to be the insistence on the *purposiveness* of our whole mental life. Thus Mr. Schiller defines Pragmatism as 'the thorough recognition that the purposive character of mental life generally must influence and pervade also our most remotely cognitive activities'.[1] And he goes on to describe it as 'a conscious application to the theory of life of the psychological facts of cognition as they appear to a teleological voluntarism'; and as 'an assertion of the sway of human valuations over every region of our experience'.

Since few critics will be disposed to deny that the conception of our whole mental life as purposive promises to shed much light on all problems of human life, I will proceed at once to give an account of the way in which Pragmatists apply this fundamental idea to the problem of knowledge.

Teleological categories imply a distinction between a process and its end or completion, between a purpose and its attainment or realisation. Thus in knowledge we have a cognitive process, which is directed towards the solution of a problem, and we have truth, which is the solution of that problem, just as in action we have a process aiming at the production of a certain result, and we have that result itself, in which the process has come to an end. In either case we start from a situation which is unsatisfactory to us, and we try to modify it in such a way that in the end the element of disharmony and dissatisfaction is removed, and a result is produced in which, for the moment at any rate, we can rest

[1] *Humanism*, p. 8.

and be at peace. Thus a certain cognitive process comes to an end, we accept a certain view as the solution of our problem, we are 'satisfied' of its truth, when it removes an element of contradiction and discrepancy from the facts before us, when, that is, it makes the total situation with which we are dealing consistent and harmonious for the time being. By analysing the situation, perhaps by expanding it and taking in new facts, or by narrowing it and excluding irrelevant elements, by all kinds of adjustments, transformations, combinations, we labour to produce an intellectually satisfactory result, and when we have succeeded we say that 'we know' and that 'we have attained truth'. Action, similarly, may be viewed as a re-adjustment of the total situation by external means until a satisfactory result is achieved.

It is this analogy between the process of cognition and the process of action, in either case ending in the attainment of 'satisfaction,' which leads the Pragmatist to regard knowledge, like action, as volitional, conative, purposive in its nature. And, having gone so far, the Pragmatist is inevitably driven to ask: Can the end be understood in abstraction from the purpose of which it is the satisfaction? Is there any meaning in calling a result 'true' except because it supplies the solution to a problem for which we were looking?

Or, to put it differently: The nature of the end, in the attainment of which we find satisfaction, is determined by the nature of the situation which we had found unsatisfactory. The harmonious result is in the end but a development of the originally disharmonious situation, and it is this which makes it 'true'. But this development does not take place automatically, or of its own accord. Unless we have keenly felt a contradiction, or been puzzled by a problem, we do not set about discovering a solution. And when we do, we find that there is nothing, strictly speaking, arbitrary about the process. We may, indeed, have before us more than one hypothesis, each claiming to offer a possible solution, but, in the first place, all these provisional theories have arisen out of the very character of the situation which constitutes the problem; and, secondly, the one which we ultimately adopt as true is not arbitrarily forced by us on the situation, but is seen to be that which really meets all difficulties and reconciles all conflict. Every question in a way prescribes its own answer; in fact, the more exhaustive and accurate the statement of the difficulty is in the question the nearer we are to an adequate solution. Problems, one might almost say, solve themselves in being more explicitly

stated and more fully analysed. And wherever in our efforts after truth we seem to be brought face to face with an insoluble contradiction, an irreconcilable antinomy, a complete dead-lock, we may be sure it is because the facts are not completely before us, the conditions of the problem have not been fully stated.

Once this is clearly realised, we shall not be seriously puzzled in trying to understand the Pragmatist position by such objections as that a theory is not the answer to a problem because we happen to be 'satisfied' with it, but that we find it satisfactory because it solves our problem, the implication being that our satisfaction is irrelevant and accidental, since it depends on the content of the answer whether it solves the problem or not. Similarly, the Pragmatist is told that a certain view is not true because it 'works,' but that it 'works' because it is 'true,' the truth of the view being again distinguished from our acceptance or rejection of it. But, let me ask in defence of the Pragmatist: Can the truth of a statement also be distinguished from *the reasons* which lead us to accept or to reject it? Or is the acceptance of a theory as 'true' a *purely formal* endorsement on our part? If it is not, then it seems to me the reasons which lead us to *accept* a view as 'true' can be no other than the reasons why it *is* true. And this means that truth and the recognition of truth on our part cannot, in the end, be cut apart.

The case seems to me to stand thus: If the above criticisms are merely designed to bring out obscurities and ambiguities in the formulations of the Pragmatist position, they are valid enough and serve a useful purpose. I am myself the last to deny that many statements of the Pragmatist doctrine are unfortunate and misleading, and sometimes barely intelligible. But at present I am not so much concerned with correcting their methods of expression as with discovering whether, beneath all obscurity of statement, Pragmatism has a valuable truth to teach us, and if so, what it is. And from this point of view it does seem to me that to separate the truth of a statement entirely from our acceptance of it is as one-sided and false as to make our acceptance the sole and only criterion and guarantee of truth. These two views rather appear to be *complementary* aspects of the same thing. When we have attained truth we undoubtedly are satisfied in so far as a cognitive process has come to its natural and appointed end, and *vice versa*, until we have achieved this satisfaction for ourselves, we do not regard ourselves as having discovered truth. If, then, truth and satisfaction are inseparable, and can only be torn apart by a violent effort of abstraction, why

should we try to turn the one (whichever it be) into the cause of the other?[1] If, as I said above, the attainment of truth is the end of a process in the course of which an intellectually unsatisfactory situation is developed into one that is harmonious, consistent, satisfactory, it is surely impossible, except by *ex post facto* analysis, to distinguish between the result and the acceptance of the result. At the moment when we discover the answer to a problem, the solution and the acceptance of the solution are for us one and the same; truth and its recognition are not distinguished; the result and our satisfaction coincide. All the difficulties raised on this point arise, surely, from the fact that the disputants are speaking either of different stages or levels in the process of cognition, or are overlooking the difference between the acceptance—the learning—of a truth already settled and established and the first discovery of a new truth. Thus, to accept a statement as true merely on the authority of a teacher, or to deny it as false merely out of individual caprice, no doubt leaves the truth of the statement wholly unaffected. Its truth, in such a case, is neither made by my acceptance nor unmade by my denial. But what makes my personal attitude towards the statement in this case irrelevant and negligible is surely my incompetence, *i.e.*, the fact that I am not qualified to judge because I am unacquainted with the facts which the theory was designed to meet. And hence my reasons for accepting or denying it are irrelevant, and my attitude towards it remains purely 'personal' and 'subjective'. But suppose that I make myself an authority on the subject, and, after a careful survey of the facts, accept the theory. Is my acceptance still a matter of indifference? Is it still an idle addition? Or, if this seems doubtful, let us put the question negatively: Supposing I, who am now *ex hypothesi* competent to judge, find myself *unable* to accept the theory, does my denial of its truth leave that truth untouched? Let us get rid, at length, of this illogical fiction, the survival of a crude Realism, that truth and the recognition of truth are two distinct things. Whenever we find a truth—may I be forgiven for labouring this point once more—whenever we solve a problem, the truth and its finding,

[1] Similarly the puzzle about the relation of the 'truth' of a theory to its 'working' may be solved. What do we mean when we say a theory 'works'? We mean that it explains, systematises, harmonises (or whatever other phrase we prefer) the facts. And what do we mean when we say a theory is 'true'? *Exactly the same.* Hence to make the working of a theory responsible for its truth, or the truth for the working, is to deal in tautologies.

the solution and its emergence into consciousness, are one and the same. And it is a vicious abstraction which tries to cut them asunder. For myself I do not see how it can be denied that, as soon as a cognitive process has come to an end, and as long as the situation remains unchanged, the final result of that process is accepted by us as 'true'. And this seems to me to be borne out by the very way in which we at times deny that somebody's acceptance of, or satisfaction with, a given theory has anything to do with the truth of that theory. For such denial, surely, is always based on a claim that we know *more* about the facts, and understand them better than the man whose theory we are criticising. If we viewed them as he does, his theory would satisfy us as it does him, and therefore be 'true' for us as it is for him. It is just because to us the problem is different that his solution is unacceptable and false. And it is in this way that our knowledge and our Science progress: we can condemn a view as false only by bringing it before the tribunal of one that is truer: 'The criterion of Science,' as Prof. Bosanquet says, 'is simply the Science itself in its further advance'.[1] This means that the *expert* is the real judge, and that the truth or untruth of a theory can only be judged by one to whom the answer to this question is of vital importance, because without it the world of his experience will not be rid of discrepancy or conflict. We must be verily troubled by a problem before the truth or error of a solution offered can cease to be a matter of indifference to us. And, therefore, we cannot judge of the truth of a theory unless we study it in relation to the facts which it was formulated to explain, *i.e.*, in its relation to the wider context of experience, of which it forms a part. Apart from that context it is meaningless. This seems to be the natural interpretation of the Pragmatist doctrine, that the truth of a statement 'consists in its application' or 'in its consequences'. The phrase is not well chosen, but, if it means that we cannot judge whether a statement is true or false by merely studying it in itself, but only by considering whether it is justified by our experience, by the world as we know it, we have, surely, little reason to quarrel with more than the words. Any statement, from 'The earth goes round the sun' to 'The world is a manifestation of God,' demands that, before we accept or reject it, we shall consider whether the world of our experience bears it out or not. And if we have no past experiences to which to appeal for confirmation, is it

[1] *Inaugural Address on the Practical Value of Moral Philosophy*, p. 23.

not obvious that we shall try to *gain* some experience or observation which will decide the point? In other words, shall we not 'experiment' and thus try to 'verify' the theory? And how do we experiment? We argue: If a certain view is true, *i.e.*, if the situation is as we think it to be, then such-and-such consequences are bound to follow, and will be observed by us if we put ourselves into a position to observe. And *vice versa*, if the expected consequences do follow, then the view in question *is* true; it has been 'verified'. Whenever fresh experience bears out our anticipations, these anticipations become verified, and the theory on which they were based is regarded as true.

It is one of the main characteristics of Pragmatism that it is primarily interested in this process of the *discovery of truth*, the extension of our knowledge. It tries to apprehend the nature of truth by observing truth 'in the making'. It watches the procedure of the scientist, working on the fringes of his subject, and it builds its theory of knowledge on the way in which he gains new knowledge, and in a toilsome process of observation, reflexion and verification discovers 'truth'. *And it then turns back and tries to apply the insight thus gained to the explanation of knowledge, which is no longer sub judice*, but has been more or less definitely accepted. Hence the fundamental problem for the Pragmatist is not: What *is* knowledge? Or, What *is* truth? But: How do we come to know? Or, Why do we accept this or that as true? And the criteria of truth which he finds employed in actual concrete processes of cognition he then maintains to have been used also in the building up of the knowledge which we accept from the past and acquire in education.

Thus watching the scientist or any other worker in the field of knowledge at his work, the Pragmatist finds that knowledge is, as a rule, not attained unless preceded by a desire to know, and again that this desire is not vague and undefined, but always particular and definite. There is no attempt to know unless it be for the satisfaction of some purpose, which directs the general line of inquiry. There is no desire to know except it be for the solution of some particular problem which we have set before ourselves, or for the understanding of some obscure, unassimilated fact which has intruded itself into our experience. Thus what we discover depends very much on what questions we ask; *i.e.*, on our *selective* interest, which leads us to attend to one thing rather than another; on the purpose which guided our inquiries in one direction rather than another. However, in the development of our knowledge, we by no means always

take the lead; our attention is not always spontaneously directed; more often it is compelled to turn to an object, and thus the relation of the various elements in our experience to our *will* becomes a central fact in the development of that experience. There are facts which we seem to find because we have sought them; there are others which seem to force themselves on us in the face of our dearest wishes. Epistemologists have ever spoken of something 'given' to us in experience, something to be accepted by us in contrast to what we 'make' out of the given or, as it were, 'add' to it.

If these phrases have any meaning, that meaning, surely, must be looked for in the independence or dependence of the various elements of our experience on our *will*. 'Given' are those elements which compel our attention without being sought by us, which come to us as alien, other, not of a piece with the rest of our experience. But as soon as we set to work on them, as soon as our thoughts busy themselves with these intruders, analyse them, understand them, make theories about them and find for them a place in the scheme of our world, behold how their strangeness disappears and they become part of our world, because of what we have 'made' of them by our mental activity voluntarily directed towards that end.

This double-faced nature of truth, as partly revealing itself to us, partly made by us, seems best explained by a reference to the *willing, purposive* element in our nature. It is primarily so far as the world opposes itself to us and checks our activities, whether theoretical or practical, that we distinguish ourselves from it. A problem, a difficulty, a contradiction is an inhibition to our intellectual activity, an obstacle in its path, the very presence of which stimulates us to fresh activity and to an effort to overcome the hindrance. Similarly, in practical action, a check calls forth increased activity and variations in our attempts to achieve our aim. But, unless in either case our activity were purposive and conative, why should we not accept a check as final? What is it that makes us resent it and try to defeat it? The will, which the Pragmatist brings forward in explanation, is, of course, not some blind, irrational impulse, the enemy, like Schopenhauer's Will, of all that is intelligible and reasonable. *The term will is introduced mainly to emphasise the purposive nature of thought.* It is, therefore, in no sense opposed to thought. Rather the Pragmatist's contention is that there is no thinking which may not also be viewed as willing, if we lay stress on its active side, on the fact that it is guided

by interest and aims at the solution at problems. And, conversely, will does not exclude thought, but contains it as part of its very nature, so that we can only separate the one from the other by an abstraction which destroys the meaning of either. Just as in our thinking we are bound by the initial assumptions which we have made, or by the basis of 'fact' which we accept to start with, so we may bind our will by some initial act of decision. And again, just as we cannot free our thought except by giving up those initial assumptions, so we cannot regain our freedom of will except by cancelling that initial act. How near akin to each other thought and will are may be seen from the fact that both have, in Mr. Bradley's language, their 'Other,' *i.e.*, deal with something other than themselves. Nor must we forget a truth the full significance of which (in spite of Kant!) is hardly sufficiently realised, *viz.*, that *self-consistency* is the law of our will (practical reason) no less than of our thought (pure reason). Once we have decided on a line of action we must persist or cancel our decision, just as our thought must either remain within the conditions once laid down for its activity or else change those conditions. And there is, perhaps, a great deal more to be said than thinkers are nowadays willing to admit, for the contention of Descartes and Spinoza that all acts of assent and dissent, in short, all judgments, are acts of will.

But, at any rate, whatever the exact relation of Thought and Will may be—it is too big a subject to be treated adequately within the limits of this paper—it is clear that experience presents us with obvious contrasts and conflicts, which can best be described by a reference to our will. Thus some parts of our experience are 'objective' in the sense of being relatively independent of our willing; others are more 'subjective' and under our control, so especially our thinking activity, if with the Pragmatist we regard it as guided by purpose and will. It is through the *interaction*, the free play, as it were, of these elements against each other, that our experience grows and develops. This 'interaction' must not be misunderstood. It is *not* meant in the ordinary realist sense, as if there were a reality apart from us, unaffected by our knowing it, but itself affecting us and producing in us an idle image and reduplication of itself called knowledge. Mr. Schiller is sufficiently emphatic in repudiating any such view of interaction,[1] which indeed can hardly be called 'interaction' seeing that knowledge, according to the naïve realist,

[1] *Humanism*, p. 11 note.

apparently makes no difference to the reality which is known, though it makes all the difference in the world to us, who know it. But then the realist has a convenient way of forgetting that every causal relation is *reciprocal*, *i.e.*, that a cause can only act and produce an effect by suffering a modification itself. But whilst we are changed by acquiring knowledge, the realist never tells us how the reality is changed by producing a knowledge of itself in us. However, there is no need to belabour a view which for philosophers is dead and buried, and which at its best derived its plausibility from meaningless spatial metaphors about knowledge being 'in' us and reality 'outside'. It is not this kind of relation between subject and object which the Pragmatist means. On the contrary, when Mr. Schiller says: "The actual situation is of course a case of interaction, a process of cognition in which the 'subject' and the 'object' determine each the other, and both 'we' and 'reality' are involved, and, we might add, *evolved*," and when he further speaks of reality as 'determinable' by our reactions he, surely, is simply describing facts with which we are all familiar in our cognitive life. If we contrast any two stages in a cognitive process we find that the later stage does not contain the former bodily *plus* certain external additions, as if the first stage could pass into the last as a lump and remain in this process wholly unmodified. Rather the earlier stages reappear in the later ones in a transformed, *i.e.*, in a more harmonious, more systematic, more coherent shape. I have had occasion once before in this article to maintain that reflexion does not leave unaffected that which we reflect on, that thought takes up and re-shapes the material on which it sets to work. And this process of fuller understanding may rightly be viewed as a process of introducing greater determination, structure, unity into an experience which was relatively indeterminate and chaotic, though lending itself to the developments which subsequently transform it. If we bear the distinction between the different stages of a cognitive process in mind, we have a right to say, looking back from the higher to the lower, that the lower has shown itself to be not fixed and rigid, but 'determinable' in such a way as to lead to the higher. And, once this is granted, it is merely a question of accurately describing the moving forces in this development. And of these forces the chief would seem to be thought, guided and stimulated by purposes, desires and wishes. And thought, *i.e.*, the conceptual interpretation and development of experiences of a more primitive nature, whether we class them under feeling or under sensation, is certainly more 'sub-

jective' in the sense that *in* it and *through* it we affirm ourselves as rational self-conscious beings over against a world that opposes us as alien and 'other,' in a more complete manner than if we passively submitted to and barely accepted that world. But if we have learnt anything from Kant it is, surely, that thought, though it may be more 'subjective' than other modes of experience in that it more adequately expresses the nature of the human mind, is not therefore of less but rather of greater cognitive value, since it is only through its action that we build up the systematic world of our knowledge. Experience in its lower forms contains little with which we can claim kinship or which we can recognise as our own. But, as we develop it according to our needs, we seem to be constructing around ourselves a world in which our intelligence is at home, and which promises not to be wholly hostile to our spiritual demands. I am bold enough to think that the doctrine of the development of a consciousness of self and a consciousness of the world, *i.e.*, of subject and object, in relation and opposition to each other—a doctrine with which Hegelian writers have made us abundantly familiar—could be reconciled with what I hold to be the fundamental point of Pragmatism by the recognition of that self-consciousness as *essentially a purposive and willing consciousness*. The 'higher' categories, Kant's categories of faith and of the practical reason, as against his categories of science and knowledge, surely are in their very nature teleological, and answer to deep-seated demands of the human mind. They are the highest and ultimate syntheses attempted by the human mind in its effort to attain an harmonious and unified *Weltanschauung*. But Kant had not wholly bridged the gap between faith and knowledge, to the detriment of both. For, in the result, the world of science for him is not wholly rational, partly because in the end it depends on a 'given matter of sense,' partly because there is no place in it for Morality, Religion and Art. And, conversely, there remains an element of futility and contradiction about the commands of a morality, to the value of which it is not essential that they should find their fulfilment in the world of sense, and which are content with an obedience in the spirit but not in the flesh. Any theory which broke down this separation and bridged this gap would do an incalculable service to philosophy. And on Pragmatist principles such a reconciliation might be attempted by viewing Kant's categories of knowledge (pure reason) as teleological in their nature like the categories of faith, and as equally manifestations of a purposive intelligence striving to harmonise the world of its experience.

From this point of view the Pragmatist theory that all 'axioms' were originally 'postulates' may most fitly be approached. To do justice to this theory—and a just understanding after all is the critic's first duty before he may begin to criticise—it is necessary to bear in mind two things: 1. That the theory would be wholly indefensible if postulation had always to be explicit and conscious. 2. That we must not forget to distinguish between the abstract formulation of a principle and the concrete functioning of the mind, or, if the phrase be preferred, the concrete process of experience, by reflective analysis of which we arrive at the abstract principle. Both points may conveniently be treated together. In talking of Postulates it is easy—and Pragmatists have hardly always avoided the danger—to slip into hazy evolutionary language, to the effect that minds arose at a certain point in the world's history as 'accidental variations,'[1] which then proceeded to set up certain postulates as to the character which the world in their opinion ought to have, and which survived or got 'eliminated,' according as these postulates were accepted or rejected by the environment. Such a view, or anything approaching near to it, appears to me untenable. To apply the conception of 'survival values' to the process in which our knowledge develops seems to me to falsify the issue by misleading analogies. The way in which, *e.g.*, modern scientists set up, test, verify, or, if necessary, change and discard hypotheses cannot really be understood by means of the principles which make *e.g.* the elimination of the Mammoth and the survival of the modern elephant intelligible. The two processes have nothing in common, for, when we abandon a theory in favour of a better one, the latter not merely represents an advance on the former, but carries the truth of the former along with it freed from error and limitation. The advance is pure gain and nothing is lost. But the same cannot be said in any intelligible sense of the elimination of some animal species and the survival of others. The only sense in which truths can be said to 'survive,' is that we hold to them as long as they fit into the wider body of experience of which they form a part. As soon as discrepancy

[1] We may be permitted to ask whether the first mind was a *tabula rasa?* Or, if not, had it a determinate nature of its own, and what was that nature? And conversely, since Mr. Schiller himself holds that one can only speak of reality *as known*, we require to be told what the nature of this environment was before there were minds to know it. If the above 'idealistic' principle is sound, even our present knowledge of the world as including minds cannot tell us what the world was like before there were minds, for that would involve an obvious circle.

arises we make changes and adjustments until harmony is restored, but in this process truth survives in a more perfect shape and error only is eliminated. In short, then, the process of formulating, testing and verifying hypotheses cannot really be made intelligible by the help of a terminology borrowed from biological evolution. And the inference which I would draw from this in regard to the problem of 'postulates' is this, that we cannot account for the way in which certain postulates have become axioms by means of any theory which forces us to assume that they were originally formulated as explicit hypotheses and hardened into axioms by a process of verification such as scientific hypotheses pass through.

But what, it may be asked, can be meant by *unconscious* postulation, by assumptions that are not explicitly made, and of the possible non-verification of which we should therefore presumably not be aware? In one sense the question is meaningless. For assumptions of which we are not explicitly conscious certainly exist, and it has always been one of the functions of philosophy to bring out and test the uncriticised assumptions which underlie our ordinary thinking, and of the use of which we are ourselves unaware prior to critical reflexion. We must, therefore, distinguish between the explicit and abstract formulation of a principle, and its concrete functioning in the texture of our experience. Now, in reflecting on our experience and abstracting out of it the principles which seem to be at work in it, we are in danger of universalising them unduly and of forgetting the conditions which in practice limit their use. It is as a protest against all attempts to make any principle 'absolute,' and to disregard the limiting conditions of its particular applications, that the Pragmatist speaks even of so-called 'laws of thought' as 'postulates'. He merely wishes to point out that there are aspects of experience to which they do not apply. The Pragmatist makes no attempt to deny the validity of these principles by calling them 'postulates,' he merely maintains that their validity is not 'absolute'. And in support of this contention he points to the fact that in our very thinking we disregard, and thereby implicitly admit the limitations of, the 'laws of thought,' without stultifying our thinking. Thus we have formed a number of conceptions to deal with all those aspects of our experience that involve process and change. Not one of these conceptions, whether it be that of Time, or of Change, or of Continuity, or of Development escapes, as Mr. Bradley has abundantly shown, inner contradiction. If we try to analyse any one of them

we find ourselves involved in a hopeless conflict between the claims of identity and diversity, sameness and difference. Such a result, the Pragmatist maintains, does not condemn them. It only shows the limitations of the law of contradiction, as being too abstract to do full justice to all sides of our experience. The Pragmatist does not wish to deny the validity of this or any other law, or to declare it illusory. On the contrary, he defends that validity, but, at the same time, *he limits it*, or rather he bids us recognise the limitations which we ourselves enforce on it in actual use.

In short, according to the Pragmatist, the validity of no law, no axiom, can be such that we should rather cling to the axiom through thick and thin, and deny our experience, than modify the axiom or *point out the limits* and conditions of its applicability. No truth is immutable for ever and ever: its validity rests on no inherent self-evidence,[1] but only on its continual verification in experience. So long as a truth thus proves its 'truth,' there is no need to tamper with it. But we must always reserve to ourselves the right to alter our conceptions, if that need should arise. The Pragmatist would heartily agree with Mr. Bradley's dictum: 'Finite truths are all conditional, because they all depend on the unknown'.[2] Further knowledge may always force us to modify them. Nor need the recognition of this fact induce a sense of Scepticism, or a loss of confidence in the trustworthiness of our knowledge. Our knowledge justifies itself every day of our lives in that we succeed in living by the light of it, in that reality behaves as from our knowledge we foresaw and foretold that it would behave. It is absurd to ask: Will our experience ever alter so completely that *e.g.* the law of contradiction or the truth of Mathematics cease to be 'true'? For, in the first place, it is obvious that there are even now large parts of our experience of which neither the one nor the other is true, to which they are simply not applicable at all, or which, if applicable, they are far from exhausting. That the law of contradiction is incapable of dealing with change we have seen already. As for space—the whole of our so-called 'inner' experience is not in space, and the laws of Geometry are in no way applicable to it. If we imagine a being possessing no perceptions of an extended world but merely feelings like pleasure and pain, heat and

[1] The term 'self-evident' is one of the many danger-signals in philosophy, for it is generally used to cloak obstinate and indolent Dogmatism.

[2] *App. and Real.*, p. 543. The 'unknown,' of course, is for Mr. Bradley only relatively so. It is part of the Absolute and, therefore, at any rate of the 'self-same sort as the known'.

cold, and abstract thoughts, the conception of space as infinitely extended, infinitely divisible, of three dimensions, would be simply meaningless to him. And that is what all our conceptions would become if ever they were repudiated by experience and ceased to be applicable. And as for Arithmetic, it is only by an enormous amount of abstraction that numbers are applicable at all. We have to disregard practically all the character and content of things, we have to treat them as 'mere' things, as barely distinguishable from each other, if we want to number them. 1 = 1, but one man and one tree and one dog can be treated as equal only if we take them merely as 'objects'. The principle has the greatest practical importance. In elections, for instance, votes are simply counted. They are equal to each other so far as each is 'one,' but they are equal in no other sense. Their differences of weight and value, which are surely real enough, cannot be treated mathematically at all. It depends thus always on a conscious abstraction made for a definite purpose whether numbers are applicable or not. This is even more obvious in the case of *continuous* processes, which we must split up into arbitrary particles, if we are to treat them arithmetically at all. Thus the infinite divisibility of time is merely its continuity expressed in such a way that it may become accessible to measurement, *i.e.*, to mathematical treatment.[1] We may, then, take it for granted that all our abstract conceptions, just because they are abstract, possess no mysterious validity within themselves which places them entirely and on principle beyond the reach of correction, but that they must fall back for proof of their validity, if challenged, on the experience from which they were abstracted. There is thus always a chance that, as our experience grows, we may be compelled to modify even apparently well-established conceptions, but, on the other hand, the more experience grows *without* demanding modification, the smaller becomes the chance that it ever will do so. We have accumulated in the course of time a comparatively stable fund of knowledge, and as both the direction and the method of new inquiries will depend largely on what problems are forced on us by our already acquired knowledge, and what methods have proved their usefulness, progress is always to some extent determined by past achievement, and this is a factor which resists change. But there is no part of our knowledge which can claim on

[1] Number is not, of course, as Kant, and later Helmholtz, believed the abstract expression of temporal succession. But to enter into its psychological genesis here would take us too far. *Cf.* Ebbinghaus, *Psychology*, p. 486 ff., and Ostwald, *Naturphilosophie*, p. 102 ff.

principle to be beyond the need for verification, or the possibility of modification.

It is easy to illustrate this from the Sciences. Astronomers have taken into consideration an alteration of Newton's Gravitation-theory which would become necessary on the assumption that the 'mass' of the universe is infinite, and which would yet explain the movements of the planets as well as Newton's theory.[1] The law of the Conservation of Matter is still being experimentally tested by prominent chemists with a view to discovering exceptions. The investigations of meta-geometricians seem to show that our Euclidean space is only a special case of a space of an indefinite number of dimensions, and that it would be theoretically possible, though hardly convenient, to calculate the spatial properties of bodies by means of any one of those meta-geometrical space-concepts. In fact the procedure of the Sciences most obviously bears out the Pragmatist doctrine, that the 'truth' of a theory must be judged by the results of its application; that the 'true' is the 'useful,' in the sense that a theory is accepted as true if it explains, classifies, co-ordinates our experiences and presents them in a consistent scheme. From the standpoint of Science, too, we can best understand the stress laid on the need of experiment and verification, the impatience of 'useless' knowledge, which will not explain anything, and does not admit of experimental verification,[2] and the profound sense of the merely provisional character of much that claims to be knowledge. Again, the strongly *empirical* tendency of Pragmatism becomes intelligible from this point of view, and the contrast on which it insists between abstract and conceptual 'knowledge about' and concrete, perceptual experience or 'acquaintance with'.

But, if Science, with its hypotheses and verifications, supplies a good illustration to the doctrine that most of our thought-interpretations of experience have, to start with, the character of 'postulates,' an even better illustration is afforded by the conceptions that guide our *ethical* life. This is the aspect of Pragmatism which Prof. James has made more particularly his own, and which he designates as the 'Will to believe'. We are here dealing with those half-conceptual, half-imaginative syntheses of experience which we call a man's ethics, his religion, his world-view. It is still the same purposive intelligence which is at work here,

[1] See W. Seeliger's essay: 'Über das Newton'sche Gravitationsgesetz' in *Astronomische Nachrichten*, 1895.

[2] *Cf.* Prof. Ostwald's polemic on these two heads against the atomic hypothesis, *Vorlesungen über Naturphilosophie*, p. 203 ff. and p. 399 note.

and it still tests its theories by the only test which will ultimately decide about their life and death, by carrying them out in action and seeing 'how they work'. But the purposes have become more ideal, they are more of man's making than of nature's, therefore their realisation is more remote, and failure hardly less frequent than success. But for this very reason they appeal more to the faith, to the 'will to believe,' to make up for the want of actual verification. They make greater claims, too, on man's energy of action and consistency of purpose, for, in forcing his ideals upon the world, he has to overcome the resistance of the world, whereas, in interpreting it scientifically, he follows its lead. We have passed from the theory of the world as it is to the theory of the world as it ought to be, and the character of our activity differs accordingly. We can let others acquire knowledge for us, but to modify the world in accordance with our ideals requires *personal* effort. We can accept on trust scientific results gained by others, but our Morality we must carry out in action, and our Religion must be living faith. Great as may be the zest and the eagerness and the enthusiasm of the investigator, we view the world as presented by Science with calm detachment rather than with emotional interest. For it makes little personal appeal to us; it rather confronts us with its overwhelming objectivity. It corrects all the infinite variety and individuality of our experiences with its objective standards. In our perceptual space objects vary in size as they approach or recede, but Science holds that, wherever they are in space, their size is always the same. For our subjective experience time passes quickly or slowly according to the mood, the interest, the occupation of the moment, but our watch tells us that objective time never hurries or retards its pace. Where we see life, Science often only sees mere movement and process; where we speak of activity, it speaks of succession; where we seem to discern intelligent purpose, it may merely discover the merciless see-saw of adaptive action and re-action. However inestimable the practical convenience and value of its work may be in setting up before us a world that is common to us all, and an objective standard of reference by which to control the subjective variety of our experiences, yet, when all is said, it is a poor and soulless world. For the world which it presents to us is like a man whose habits and ways, down to the last detail, we observe from outside, but of whose character we know nothing. It describes but it does not interpret, it gives us facts and the connexions of facts, but not their meaning. But there are attitudes towards the world in which we try

to discover a deeper meaning in the world, or rather, perhaps, to lay it into the world and see whether its ways will bear out our 'hypothesis'. And since no attitude for Pragmatism can be purely contemplative and reflective, since thought is but a half-way house on the way to action, we try to *make* our assumptions true by carrying them out in action ourselves, and thus forcing on the world, so far as it is within reach of our influence, the character which we think it ought to have. The world from the scientific point of view is and remains morally indifferent, grinding out good and ill impartially. But in a certain narrow sphere, mainly in our own lives and those of our fellows, we try to produce results of a certain value which we alone can appreciate. Just as knowledge is for the Pragmatist a process in which the basis from which we start shows itself to be capable of development and to admit of further determination, so the world is no less determinable by our action. There are, indeed, limits to our power, yet within those limits we can modify the world very largely, so as to harmonise with our ideals. And the only way to find our demands realised is to realise them ourselves.

In such a view of the world we find the basis of Prof. James's *Will to Believe*, and his doctrine that 'Faith in a fact can help create the fact'.[1] His central idea is, that in all cases where we *must* decide between different views of the world or different lines of action, without having sufficient evidence for intellectual conviction,[2] that the one view is true and the one action will make for good,—that in all these cases our will and our emotions *legitimately* come into play and decide the issue.[3] The point is not merely that, psychologically considered, none of our decisions are arrived at on purely intellectual grounds, but that this admixture of the passional nature is both *legitimate* and in many cases essential. There are problems in which we can suspend our judgment and wait for further evidence; but wherever the question is: How are we to live? or What must we do and believe? the maxim not to accept anything on insufficient evidence would simply paralyse us. Hence Prof. James defends our 'right to adopt a believing attitude in religious matters in spite of the fact that our merely logical intellect may not have been coerced'.[4] But we must justify our use of this right by carrying out our belief *in action*, by living as if our belief were true. It must not remain mere

[1] *Will to Believe*, p. 25.

[2] *I.e.*, without having evidence that would be accepted as sufficient by a scientist.

[3] *Will to Believe*, p. 11. [4] *Ibid.*, p. 1.

intellectual ballast, we must give it the chance to be proved true or false by acting on it and accepting its consequences. It is just for this reason that every belief involves a responsibility and a risk in a way in which a purely theoretical attitude never does. Ethical and religious convictions are from this point of view not theoretical but 'practical' attitudes; their significance lies in the character of the actions in which they issue: 'the whole defence of religious faith hinges upon action. If the action required or inspired by the religious hypothesis is in no way different from that dictated by the naturalistic hypothesis, then religious faith is a pure superfluity, better pruned away.'[1] And from a similar standpoint Prof. James had declared in an earlier work: 'To develop a thought's meaning we need only determine what conduct it is fitted to produce,' and 'the whole function of philosophy ought to be to find out what definite difference it will make to you and me at definite instants of our life, if this world-formula or that world-formula be the one which is true'.[2] Beliefs, in fact, are in a sense ends of action: they imply the attempt to give to our whole life a certain spiritual character, to which its merely physical functions are wholly subordinate. Hence Prof. James's dictum: 'The whole man within us is at work when we form our philosophical opinions'.[3]

We must develop the implications of this doctrine a little more fully. In the first place it is essentially prospective. It treats the past as dead and gone and unalterable for ever, but the future is the region of possibilities, the realisation of which largely depends on the course of action which we pursue.[4] In some respects, indeed, we know what the future will bring, and that we cannot alter its course, but so far as the range of human action goes, the future is for us indeterminate and determinable. Thus Prof. James is led to uphold *Indeterminism* by way of doing justice to the facts of our active life. And since this is by far the most serious point of conflict between the scientific and the ethical views of the world, we must dwell on it for a moment. The function of Science in the economy of life is to clear up the future.[5] It tells us what to expect by studying the past and present

[1] *Will to Believe*, p. 27 note.

[2] *Philosophical Conceptions and Practical Results* (Publications of the University of California).

[3] *Will to Believe*, p. 92. [4] *Ibid.*, p. 81.

[5] *Cf.* Ostwald, *Naturphilosophie*, p. 16: 'The power to act suitably through anticipation of certain events in the farther or nearer future is what strikes us as the foremost characteristic of experience'.

processes of nature, and arguing by the law of the uniformity of nature, that under like conditions like events will happen again. The qualification 'under like conditions' shows all predictions of science to be hypothetical; and the problem whether and when these conditions will occur is for Science insoluble, especially in all those spheres where human activity is a modifying factor. Some events, as, *e.g.*, the course of the stars, it can predict with a certainty little endangered by the abstract possibility of an ignorance of disturbing factors; but with regard to most processes of nature it can only tell what will happen *if* anything happens at all, but not *whether* anything will happen. In other words, it can describe the general character of natural processes, but it cannot, as a rule, undertake to predict a particular event at a particular time and place. Nor is this, on the whole, what we want it to do. We want nature to be rigidly determined according to law only so far as we *cannot* control it and interfere with it, but so far as we can modify its course we want to be *free* to do so. And here we seem to have at once the origin and the uses and the limits of the determinist view of nature as a system rigidly controlled by the succession of cause and effect. It is one of those abstractions which arose, like ordinary Realism, by leaving out of account Man with his knowledge and his activity. For the explanation of the latter the indeterminist principle of freedom was adopted, and the two principles came into open conflict only with the attempt to extend the principle of Determinism from the outer world to the psychical life of man. To explain this a little more fully: it is obviously of the greatest practical importance to man, in the first place, to be able to foresee with a high degree of certainty under what conditions he will have to live in the future, particularly so far as he cannot make or modify either the character or the occurrence of those conditions by his own activity, as, *e.g.*, the succession of night and day and the change of the seasons; and, in the second place, to know the character and effects of those natural processes of which he can create or modify the conditions of occurrence, so as to use them for the attainment of his ends. In the former case he simply wants to know what will happen irrespective of his own activity, in the latter what will happen if he follows a given course of action. But in either case the trustworthiness of the information must be, for practical purposes at any rate, absolute. Hence the Determinism of Science. And it is clear from this account that the principle of Determinism owed its origin to practical needs, and is limited in the **actual**

range of its successful application. Now there is, of course, no reason why the attempt should not be made to extend the principle and to make it, as it were, the programme of further scientific research. But the attempt must be judged by its success, and there is certainly *no* justification for the claim that Determinism is an absolute principle, before which every other principle of explanation must give way, even in cases to which Determinism is as yet very far from having shown itself applicable.[1] That in the absence of disturbing factors certain conditions inevitably lead to certain results has been established sufficiently for the purposes of Science. But in any case these conditions and their consequences are only a very small selection of the total state of things at any one time, and are all cases of the particular kind dealt with by the *physical* Sciences. But if we expand the principle so as to take in the total state of things at any moment both in speaking of the cause and of its effect, we stand on quite different ground. The judgments of Science, as we have seen, are abstract and conditional: if A is actual, then B will be actual. But it does not say, when and whether A will be actual in a particular case. It does not assign to A a fixed place in the time-order of actual events. But that is what we do when we interpret the law that everything must have a cause and be in turn the cause of something else, as meaning that the *total* state of things at one moment must be the cause of the *total* state of things at the succeeding and the effect of the *total* state in the preceding moment. Here we deal with actualities and particular events: we have left the abstract and general ground of Science. And it is much too easily and uncritically assumed that this re-interpretation of Determinism is really legitimate. It certainly loses all its value as a heuristic principle, which is bound up with its selection of certain features out of the total content of events. And, at any rate, it would seem that the principle of mechanical determinism, as used and verified by Science, affords us no ground for its application to the higher levels of spiritual life, and still less for its application to the whole Universe in the sense of Predetermination. The conflict, be it observed, is not between uniformity and law on the one side and anarchy and disorder on the other. It is rather between two different types of order and of law,

[1] To put it in Kantian language: There is no reason why Determinism should not be used as a *regulative* principle for research; but the fact that it has shown itself *constitutive* in certain spheres of experience is *no argument* for its being constitutive in other spheres, particularly if in those spheres it has so far entirely failed to work.

between Mechanical Determination and Teleology. And Prof. James's contention is simply this, that the part of the world which is mechanically determined does *not* lay down the law for all the rest and determine the character of the whole,[1] but rather that the course and character of mechanical processes may themselves be determined by their becoming instruments in the realisation of certain Ends. The very possibility of a choice between ends shows that the world must be conceived indeterminate in the sense that it would have admitted of the realisation of either end, and not only of the one which we actually did choose. Nor again can that choice itself be conceived as in any intelligible sense mechanically determined by a sort of conflict between the psychical contents at the moment of choice. That would be a mere travesty of the purposive and teleological procedure of our minds.

The view that the world is not a fixed and rigid structure to which nothing that we can do can make any difference, because every one of our acts has been determined from the beginning and has had its preappointed place in the whole, but that the world is itself still in process of development and realisation, and that the future is a region of possibilities, some of which we realise and others of which we make impossible by our lines of action—this view, Prof. James claims, does not imply sheer arbitrariness and anarchy. For (i.) on *our* side mechanical determination is replaced by the guidance of principles and ends and ideals, which limit in any given case our choice to but a few of the great number of physically conceivable alternatives. It is just because we have standards of action, and try to give an ethical quality to our lives, that many physically possible courses of action are morally impossible.[2] And (ii.) on the side of the world no act of ours can produce anything totally new, totally out of connexion with the rest. In moral acts we make use of mechanical nature as our instrument, hence our acts, apart from their moral value, are not different in kind from other features of the world. Are not our alternatives, asks Prof. James, 'all of them kinds of things already here and based in the existing frame of nature? Is any one ever tempted to produce an *absolute* accident, something utterly irrelevant to the rest of the world? Do not all the motives that assail us, all the futures that offer themselves to our choice, spring equally from the soil of the past, and would not either one of them, whether realised through chance or through necessity,

[1] *Will to Believe*, p. 150. [2] *Ibid.*, p. 157.

the moment it was realised, seem to us to fit that past?'[1] To affirm *post eventum* that our choice, whatever it was, was necessary and could not have been otherwise, is according to Prof. James a '*Machtspruch*, a mere conception fulminated as a dogma and based on no insight into details'.[2] But when all is said, the real backbone of Prof. James's argument is the appeal to the demands of our moral consciousness. Any one in the thick of a moral struggle feels the reality of the conflict far too intensely to believe that the issues involved are no real issues, because the decision was predetermined from the first. But if there is a real choice on our side, and if our action along the lines of our choice helps to make the future what it turns out to be, then evil becomes a practical problem, and its defeat an end for which we can work.

However, Prof. James's polemic against the Determinism of Science in support of the claims of our moral life suggests a very serious difficulty. Can Pragmatism supply a sufficient principle for the reconciliation of such a conflict in our views of the world, *i.e.*, in our different purposes? Does the conception of 'harmony'[3] which Mr. Schiller places above the conception of 'system' (in an intellectualist sense), afford such a principle? Or, when Prof. James says: 'Were several systems excogitated equally satisfactory to our purely logical needs, they would still have to be passed in review, and approved or rejected by our æsthetic or practical nature,'[4] does he suggest a workable principle by which this æsthetic valuation of logical truth is to be effected? And is it always the logical side that must give way? Is our 'æsthetic or practical' nature removed from all criticisms? Or again, if the purposes of individuals and their ways of answering their practical problems conflict, who is to decide? Is there an objective standard? That the Pragmatist throughout assumes the existence of some such standard is obvious, for if truth were purely individual, what would he gain by addressing a world which, even if it listened, he could not convince? The mere attempt to convince others implies an appeal to an objective standard. But can the Pragmatist on his principles give a satisfactory account of the existence of such a standard and of its validity? To answer all these questions we shall have to inquire into the Pragmatist doctrine of the criterion of Truth.

Pragmatism, as we have seen, bases itself on the '*psycho-*

[1] *Will to Believe*, p. 157. [2] *Ibid.*, p. 156.
[3] *Cf. Humanism*, p. 54. [4] *Will to Believe*, p. 76.

logical facts of cognition as they appear to a teleological voluntarism'. The only question, then, is, whether Psychology can supply a satisfactory foundation for a theory of *values;* for Truth, we are told, is '*a form of value*,'[1] and that is its psychological nature. No fact comes to us as a hard solid piece of reality which we have passively got to accept and to swallow. All our attempts to know are guided by a definite interest and purpose, and only what is likely to bear on the problem we are trying to solve is accepted by us as 'fact'. All facts are thus at bottom crystallised values, as being the result of a selective—for purpose implies selection—interest in the world. What is fact from one point of view may be completely neglected from another; facts, in short, are accepted 'as facts' only because they are of value for the purpose in hand.

The definition of fact in terms of value effaces the distinction between judgments of fact and judgments of value, since the former are regarded as only a peculiar kind of judgments of value, mainly distinguished from the others in implying less subjective variation. The truth-valuation thus takes its place by the side of moral and æsthetical valuations as the expression of a different purpose. But it is clear that as yet we have no criterion by which to decide either between different *kinds* of valuations if they conflict, or between conflicting truth-valuations. Moreover there is an ambiguity about the word 'fact'. In the widest sense, fact may be anything that belongs to the total mass of impressions coming to us in any one moment of consciousness. In a narrower sense it may be whatever special features we lift out of this mass into the focus of attention, and compared with which the rest forms a mere undifferentiated background. Here already we should have a 'fact' singled out by selective purpose. But even this is not enough. For the meaning of a fact is very far from being completely present in perception. Association, past experience, intellectual construction and inference invest the 'fact' with a wealth of significance which is by no means contained in the fragmentary bit of presentation. We shall have to expand, then, the meaning of fact to include these developments. And when lastly we reflect that most scientific 'facts' are abstract and general, we perceive that our conceptual interpretations and inferences constitute by themselves yet another world of 'facts'. Can the theory of truth-valuations account for the existence of these different levels or layers of facts? Mr. Schiller makes

[1] *Humanism*, p. 57.

an attempt: We start with our *personal immediate experience*: 'all immediate experience is as such real, and no ultimate reality can be reached except from this basis. . . .'[1] But this immediate experience is fragmentary and unsatisfactory: it does not throw much light ahead and can supply little guidance to action. We are thus forced at once to supplement it by the memory of other experiences and to transform and interpret it by inferences and conceptions. These are the 'realities' of ordinary life and science.[2] Their function is to explain the realities of immediate experience and to draw lessons from them for the purposes of our life. Though they are higher in the sense of giving us deeper understanding, yet as inferences they derive their reality ultimately from the immediate experience on which they are based: "the immediate experience is after all in a way *more real*, *i.e.*, more directly real than the 'higher realities' which are said to 'explain it' ".[3] Thus we find repeated from the Pragmatist point of view Mr. Bradley's distinction between the immediacy which shows that feeling (*i.e.*, immediate experience) must somehow be real, and its fragmentariness and inconsistency which always drives us beyond it on the search for a higher reality. It is just because the primitive facts which offer themselves to our purposes are insufficient for their satisfaction that we are driven to transcend them. This "is the whole aim of our conceptual manipulation of experience. If to 'think' left 'reality' the same, we should not waste our lives upon what is to most a painful and irksome business; but in point of fact our thought ministers to our perceptions and so alleviates the burden of life. The results of our past thought enter into and transform our immediate perceptions and render them more adequate as guides to action."[4]

But, so far, we have not dealt with the fact that there are different purposes possible and different attitudes towards the world, each developing its own machinery of conceptual interpretation. And the question is: Must we regard them all as necessarily divergent and irreconcilable? or must we not make an attempt to adjust their rival claims by conceiving them as subordinated to each other according to their respective 'values'? The necessity of such an ultimate Reality capable of including and harmonising all lower realities is admitted by the Pragmatist,[5] but except for a vague hint that the highest reality must be ethical[6] we find no

[1] *Humanism*, p. 192. [2] *Ibid.*, pp. 193, 199. [3] *Ibid.*, p. 195.
[4] *Cf. Humanism*, p. 199. [5] *Humanism*, p. 194. [6] *Ibid.*, p. 105.

positive attempt at the solution of the problem. Nor is it at all easy to see how, except by an arbitrary fiat, the Pragmatist can turn any one purpose into a supreme principle and criterion of all others. On the face of it, he would rather seem to be driven into holding that each of our practical attitudes towards the world is autocratic within its own sphere, and has a right to reject all comparison of its conceptual interpretations of experience with those of other attitudes. He must justify the Scientist in rejecting any attempt to criticise his work and his conceptions from an ethical or religious basis, but no less must he uphold the claims of the religious man to conceive of God as best explains his experience, without regard to the value or worthlessness of such a conception for Science. And in the result a final harmony would seem to be an impossibility. And yet since life is one, and the purposive nature of thought in all its manifestations is the same, there must be even for the Pragmatist a principle of unity. And it is a matter of experience that the conceptions we form, even though it be from different points of view and for different purposes, react on and modify each other. It would be absurd to say that the progress of Science and History has not deeply modified our religious conceptions, so far indeed at times as to endanger their existence altogether. And in turn these conceptions have reacted on our views of Science. Indeed the chief movement of thought in our times may be described as a reassertion of the religious and ethical point of view against the scientific Materialism of the last half of the nineteenth century. Pragmatism may be right in urging that a harmony between conflicting interpretations of the world cannot be attained by the road which Mr. Bradley pursues, *viz.*, of assuming that they are 'somehow' reconciled in the Absolute. But that makes it all the more necessary to suggest some positive principle of 'harmony'. The *ethical* one, which Mr. Schiller tentatively offers, hardly seems sufficient; for we require a principle which stands above all different purposes if their mutual claims are to be adjusted. And there are many reasons besides this one which make it impossible that Ethics should supply such a principle. (i.) However *practical* our scientific knowledge may be in its ultimate aims and uses, it is by no means clear that the scientific attitude towards the world is therefore *ethical*. In fact the contrary is the case. So far from being guided by ethical considerations, it treats all its objects of inquiry as ethically indifferent. A thorough and impartial study of things evil is part of the work of Science, but it is not self-

evident that such a study would be justified by Ethics.[1] And at any rate the world, as Science investigates it and presents it to us, is far wider than the world which would suffice for the needs of our moral life. What interest have we, ethically speaking, in the movements of some remote star or the habits of the Ichthyosaurus? (ii.) Our ethical standards and conceptions by which all our other conceptions would have to be judged are themselves products of thought and reflexion. And this seems to invalidate their claim to be taken without further justification as the criterion of all other manifestations of thought. (iii.) If all truth ultimately rests on an ethical basis, will it not follow that doubt must be evil and sinful?—an inference, by the way, which in religious matters 'orthodox' people rarely fail to draw. It seems clear, then, that there are activities and theoretical attitudes connected with them which cannot draw their direction or inspiration from ethical ideals. And our conclusion must be, that so far the Pragmatist has failed to supply a criterion of the relative value of different purposes and attitudes towards the world. Like the Absolutist, he postulates a harmony of which he cannot show how it is or may be attained.

And the case is not much better when we ask whether he supplies a criterion by which to judge the different truth-valuations of an individual both as compared with his own at other times and with those of his neighbours. The necessity of such a criterion is again admitted by the Pragmatist: 'the function of Logic as a normative science is to regulate and systematise our valuations of true and false'.[2] And again, 'Anything may commend itself to anybody as 'true,' nay, even as *the* truth, and there are no guarantees that any man's valuations will be consistent with any other man's, or even with his own at other times. It is only as the needs of social intercourse and of consistent living grow more urgent that *de facto* 'truth' grows systematic and 'objective,' *i.e.*, that there come to be truths which are 'the same for all'.

This process of turning subjective truth-valuations into objective truth is outlined by Mr. Schiller as follows: Already in the individual there is at work a certain principle of selection. Truth-valuations which show themselves inapplicable to large parts of experience are rejected for more comprehensive ones. The individual's diffuse interests are consolidated and subordinated to the main purposes of life.

[1] *Cf.* however *Humanism*, p. 15. [2] *Humanism*, p. 55.

The mere feeling a thing to be true does not necessarily make it so, it has to be verified by further experience. A truth-valuation to be complete must not only be made but also *sustained*.

But what, we may ask, are all these but a haphazard collection of a number of practical rules and psychological observations, which moreover are vague in their application, and admit, as Mr. Schiller himself perceives,[1] of a great many exceptions? Where is here a definite criterion? or an unequivocal principle by which to judge truth?

In fact Mr. Schiller supplements his first criterion by that of social recognition. But his utterances on the point are vague: "it is the usefulness and efficiency of the propositions for which 'truth' is claimed that determines their social recognition. The use-criterion selects the individual truth-valuations, and constitutes thereby the objective truth which obtains social recognition."[2] This sounds as if the objective truth of the individual truth-valuation were *settled before* society recognises it. With this seems to agree the fact that society blunders and sometimes fails to recognise 'useful' truths, and at other times perpetuates 'useless' truths.[3] Hence the making of objective truth after all would lie with the individual. But against this we must put the statements that the individual's truth-valuations are 'subjective' and 'chaotic,'[4] and require social recognition to become really 'safe' (=objective?).[5] It is not easy to extract any clear meaning out of all this. At any rate, against social recognition as a criterion of truth I must urge that, from Mr. Schiller's point of view, it can only be the psychological criterion of *Belief on a very large scale*. A thing is true because a great number of people believe it to be so.[6] And against social belief the same objections hold good as against individual belief; it can neither prove nor disprove validity. In other words, Psychology is prevented by its very method and point of view from dealing with values 'as values'. And this forces us to consider the relation of Psychology to Logic—a point which, as I have remarked in the first half of this

[1] *Humanism*, p. 60. [2] *Ibid.*, p. 59. [3] *Ibid.*, p. 60.
[4] *Ibid.*, p. 57. [5] *Ibid.*, p. 58.

[6] Perhaps one ought to add, as the spirit of Mr. Schiller's eulogy of the 'labours of the Inquisition' demands, "and are ready to 'eliminate' disbelievers by breaking their heads or outvoting them, according to the degree of 'civilisation' attained". Which forces on us the reflexion that after all there is a difference between the theoretical problem of refuting and the practical problem of making ineffective an obnoxious belief.

article,[1] urgently demands treatment by Pragmatists. As far as I can see the case stands thus. On the level of our immediate experiences, as Aristotle already saw, there is no truth or falsehood. All perceptions alike come to us with the same self-evidence; as experiences they are neither true nor false, they are simply there. It is only when our thought sets to work on them, when we form conceptions and try to heal their conflict by interpretation, that the question of truth and falsehood is forced on us. Now, whatever solution the individual adopts, whatever conceptions and theories he may accept as true by the criterion of usefulness and efficiency, yet all his 'truth-valuations' are, psychologically, *beliefs* and not truths. Truth, in fact, is not an object of inquiry to Psychology at all. That certain of the mental processes which it studies have the further character of being true or false, is, for Psychology, an accident. For it all mental processes without distinctions of value are *facts* to be investigated, described, explained by their causes and conditions. And for this purpose it must make no difference between truth and error. Any attempt to derive the validity, *i.e.*, the objective truth of a thought, from the manner of its psychical existence is bound to fail. For psychology at best can but give us the psychical characteristics of *subjective* truth, and even then *it presupposes that we know already what truth is.* We must first have called a given thought 'true' before we can inquire whether it possesses any particular psychological characteristics not owned by thoughts that are not true. And then we find that these characteristics attach to more thoughts than are objectively true; in other words, they are the marks merely of *beliefs.* In certain ideas our thought finds satisfaction and comes to rest; their characteristic may be clearness and distinctness, as Descartes, or liveliness, as Hume thought, or lastly efficiency and usefulness as Mr. Schiller thinks—but that is not enough to establish their objective validity. The point I am trying to enforce is simply this: that, though every objectively valid thought must have psychical existence, its validity cannot be derived from its psychical existence at all.

This inability to deal with validity seems to beset all psychologies alike, whether they be voluntaristic or not. The matter turns entirely on the question of validity: How is it possible that a thought, *i.e.*, a psychical fact, can possess validity, and that yet this validity can be beyond psychological treatment? We admit the psychologist's contention that

[1] *Cf.* MIND, N.S., No. 55, p. 301.

a valid thought which is not a concrete thought in an actual mind, is an empty abstraction. But we deny his ability to deal with that validity from the point of view and with the methods of his science. For what is the result when Psychology attempts to treat the problem of validity? *Simply this, that the problem disappears altogether.* This comes out with admirable clearness in the *Elements of Logic*[1] which the famous psychologist, Prof. Th. Lipps, has written. He refuses to define Logic as the Science of normative laws of thought, *i.e.*, of the laws of *true* thought, for so far as we think at all we think truly, since we could not have thought otherwise than we did. Logic, then, is simply the Science of the forms and laws of thought: 'the question of what one ought to do is always reducible to the question what one *must* do to achieve a particular purpose, and this question again is equivalent to the question: *How is the purpose actually achieved?*' In other words, we come back to the point on which I dwelt above, that Psychology must presuppose truth and validity before it can trace the processes which lead up to them. But, if so, truth and validity must have been decided on other grounds than those which Psychology has to offer. And the question is just: What are those grounds?

We can best arrive at an answer by observing *why* exactly Psychology fails. *It fails through its method of introspective or, more accurately, retrospective self-observation.* Any actual judgment in the moment of its making is not only a psychical fact but carries with it the *claim*, at least, to validity. The same judgment, studied retrospectively as a 'fact' of consciousness, has lost its validity. Whatever in studying I say about it is an actual judgment and claims validity. But the content about which I speak is dead and the life-breath of validity is gone from it. Actual living thought always claims to be true; the same thought made an object of further thought becomes for Psychology a dead fact which is neither true nor valid. It is simply a fact which carries no further meaning with it. In self-observation the observing part of the self and the observed part no doubt have both psychical existence—but not in the same sense. The subject can never literally become its own object: as soon as we make it an object, we take up a position 'outside' it, which position is itself not an object.[2] In short, a judg-

[1] *Grundzüge der Logik*, 1893.

[2] *Cf.* the admirable things said by Mr. Bradley on this point in chap. ix. of *Appearance and Reality*, The Meanings of Self.

ment as *analysed* by Psychology is a mental process and no more, but as actually *performed* it is a good deal more. For as such it points beyond itself, it carries with it a meaning which in no intelligible sense can be identified with its psychological nature. The judgment in the moment of its making is an *indissoluble unity of psychical existence and validity.*[1] In judging we are conscious, but not self-conscious in the introspective sense. For all vivid thought absorbs in itself the whole mental life of the moment, and there is no spiritual energy left outside to observe at the same time the thought in its living movement. Such a split in our mental life, involving two processes running literally and simultaneously side by side, and of which the one all the time makes an object of the other, would be a psychological monstrosity. The thoughts which Psychology studies are no longer living thoughts; but its own attitude towards those objects of its study is a living one, and therefore not itself an object. And it must now be clear why Psychology, which studies thoughts only as psychical 'facts,' cannot touch their validity. The living thought is psychical existence and claim to validity in one, and for this very reason not its own object. This is indeed, as Lotze calls it, 'miraculous,'[2] but it seems impossible to deny it. However far Psychology may analyse a judgment, it will never find there anything in the least like validity, as little as any analysis of brain-cells will ever reveal a Thought or a Feeling. For Psychology stops short just where the real life of the judgment begins.

Where then have we arrived? The Psychologist rightly claims that validity cannot exist entirely apart from conscious process, but his analysis of such process fails to reveal its presence. The logician claims that, at best, concrete thought, as it passes in particular minds, has but a *claim* to validity, but is not valid by the mere fact of its existence. Where then is validity to be found?

Every thought with its claim to validity, says Psychology, is primarily a process in an individual mind. Every one who does not submit tamely to the authority of his age, or accept its opinions on trust, but tries to 'square' the world for himself as best he may, will construct a world-view of his own, will value some aspects more, some less than his neighbours. The God whose finger one man loves to trace in every detail of his own and his nation's history may seem

[1] *Cf.* Prof. Stout's distinction of the *psychical existence* and the *representative function* of sensation in his paper on "Primary and Secondary Qualities" (*Arist. Soc. Proc.*, vol. iv., 8).

[2] *Logik*, p. 573 (German edit.).

to another but a refined survival of the primitive Animism of his forefathers; the artistic enjoyments of men of finer sensibilities do not exist for the Philistine. Yet we must maintain that all our individual worlds are somehow related to The World, to one common world in which we live, which is the object of our studies, and which really contains all the aspects which we severally find most prominent. And the philosopher, as a rule, recognises his obligation of taking account in a comprehensive picture of the world of *all* its various aspects, however little significance one or the other of them may have for his own individual experience. Science deliberately sets itself to discount and eliminate the individual factor, and its success is attested by the universality with which its results are accepted—at least so far as they are so-called scientific 'facts,' facts in the order of nature, which can be demonstrated to every one, tested by experiment, measured, weighed, calculated, in short submitted to tests and trials accepted by every one. But it only attains this universality by narrowing its scope. To succeed it has to renounce the attempt to penetrate into the heart of the mystery of things: it must be content to calculate not to interpret. Whenever it has gone beyond the measurable, experimentally demonstrable 'fact,' and embarked on the interpretation of fact by means of theories and hypotheses of a metaphysical nature, it has at once come into competition with countless rival theories of equal claim to tell us all about ultimate Reality. And yet all these theories, in spite of their conflict, and in spite of being, as attempts at interpretation, of an inevitably individual character, continue to aspire to universal validity. And their champions are right, for truth is not a thing that any one may possess for himself alone. A thinker, perhaps, could not help seeking it, driven hard by doubts and perplexities; it may have been nought but his own fierce desire for peace and understanding which led him to find it—however it may have come to him, he cannot keep it as a thing apart. A truth-finder of necessity becomes a truth-teacher. For truth loses half its value if it does not admit of communication to, and acceptance by, others. But this implies that the individuality of interests and purposes and points of view has its limits: that men have interests in common which are the more fundamental the more they reach down to the bedrock of human nature. And similarly human experiences are made largely of the same stuff. But, if so, must we not admit that all human life and work, whether in thought or in action, forms a whole? And is this not to admit the truth of Absolutism: that our in-

dividual lives are part of a wider life, and our individual experiences elements in a more embracing experience?

Or, to reach the same conclusion by a somewhat different road, If our individual worlds are all somehow related to one common world, what sort of existence are we to ascribe to this common world? Is it a mere abstraction from all individual worlds? Does it leave out the purely individual and retain merely the common aspects? And would not such a world, just because it abstracts and leaves out, be so far an unreality and a fiction? Or must we say that each individual with his individual world-view is an element in the world, and has a share in its life, in spite of, or rather just *through*, his individuality? We all speak in common parlance of 'Science' and 'Religion' and the 'State' and the 'Church,' and countless other 'abstract' terms which yet denote realities. But what sort of existence have these realities? Take Science. We introduce scientific facts with: 'Science says . . .' But what is Science? Where does it exist? It is not present at any one moment as a whole to the mind of any one man, nor to the minds of all men taken together. All thoughts on Science regarded merely as psychical processes do not constitute Science: all text-books, however complete, cannot take its place. It is a body of knowledge continually shaped, modified, increased by the labours of hundreds of minds, and yet it is at no time in its entirety the object of any one or all of them. It exists and continues to exist and to grow, just because it is a monumental work to which every 'scientific' thought to some degree contributes, and which is sustained by the total intellectual effort of men in a given direction. Or take Church, State, Society, in which theory is not so prominent as practice, and which, though they involve convictions, depend yet more for their expression on the activity of men and make claims on their life and their labours. The State exists only through every one in it doing his duty and filling his place in the life of the whole. And so with Church and Society. They all exist but as forms of a common Life to which countless individual lives in various ways contribute. But they can never be understood as mere aggregates of such individual lives, as little as Science or Philosophy are the mere aggregate of scientific and philosophical thoughts. If we adopt Prof. Eucken's convenient phrase and call this phenomenon our '*Arbeitswelt*,'[1] then we seem to have in

[1] *Cf. Prolegomena zu Forschungen über die Einheit des Geisteslebens*, p. 46.

this '*Arbeitswelt*,' which comprises the whole of human life in all its practical as well as theoretical aspects, that unifying principle which we require as a standard. It supplies a solution of the problem of validity, for human thought can, in the end, only be measured and tested *by its own work*, and the claim of the individual thought to be valid and true will be justified or rejected according as it is fitted to enter as a lasting element into that work or not. But since this work itself is but sustained by living effort, we understand how it is that the individual thought, whilst looking to it as its criterion, yet helps to make and develop the criterion. Our principle further admits and recognises, nay, depends on, progress and development; and ends, ideals and purposes are for it the very breath of its life. Thus it does justice to the claims of Pragmatism; and at the same time it corrects the failure of Pragmatism to find a unifying element, a whole to which all manifestations of purpose, all activities, practical and theoretical alike, contribute. And as such a principle of unity it preserves the truth of Absolutism, without denying and robbing of their significance all those aspects of life which to us are most vital.

II.—ON DENOTING.

By Bertrand Russell.

By a "denoting phrase" I mean a phrase such as any one of the following: a man, some man, any man, every man, all men, the present King of England, the present King of France, the centre of mass of the Solar System at the first instant of the twentieth century, the revolution of the earth round the sun, the revolution of the sun round the earth. Thus a phrase is denoting solely in virtue of its *form*. We may distinguish three cases: (1) A phrase may be denoting, and yet not denote anything; *e.g.*, "the present King of France". (2) A phrase may denote one definite object; *e.g.*, "the present King of England" denotes a certain man. (3) A phrase may denote ambiguously; *e.g.*, "a man" denotes not many men, but an ambiguous man. The interpretation of such phrases is a matter of considerable difficulty; indeed, it is very hard to frame any theory not susceptible of formal refutation. All the difficulties with which I am acquainted are met, so far as I can discover, by the theory which I am about to explain.

The subject of denoting is of very great importance, not only in logic and mathematics, but also in theory of knowledge. For example, we know that the centre of mass of the Solar System at a definite instant is some definite point, and we can affirm a number of propositions about it; but we have no immediate *acquaintance* with this point, which is only known to us by description. The distinction between *acquaintance* and *knowledge about* is the distinction between the things we have presentations of, and the things we only reach by means of denoting phrases. It often happens that we know that a certain phrase denotes unambiguously, although we have no acquaintance with what it denotes; this occurs in the above case of the centre of mass. In perception we have acquaintance with the objects of perception, and in thought we have acquaintance with objects of a more abstract logical character; but we do not necessarily have acquaintance with the objects denoted by phrases composed

of words with whose meanings we are acquainted. To take a very important instance: There seems no reason to believe that we are ever acquainted with other people's minds, seeing that these are not directly perceived; hence what we know about them is obtained through denoting. All thinking has to start from acquaintance; but it succeeds in thinking *about* many things with which we have no acquaintance.

The course of my argument will be as follows. I shall begin by stating the theory I intend to advocate;[1] I shall then discuss the theories of Frege and Meinong, showing why neither of them satisfies me; then I shall give the grounds in favour of my theory; and finally I shall briefly indicate the philosophical consequences of my theory.

My theory, briefly, is as follows. I take the notion of the *variable* as fundamental; I use "C (x)" to mean a proposition[2] in which x is a constituent, where x, the variable, is essentially and wholly undetermined. Then we can consider the two notions "C (x) is always true" and "C (x) is sometimes true".[3] Then *everything* and *nothing* and *something* (which are the most primitive of denoting phrases) are to be interpreted as follows:—

C (everything) means "C (x) is always true";
C (nothing) means "'C (x) is false' is always true";
C (something) means "It is false that 'C (x) is false' is always true".[4]

Here the notion "C (x) is always true" is taken as ultimate and indefinable, and the others are defined by means of it. *Everything*, *nothing*, and *something*, are not assumed to have any meaning in isolation, but a meaning is assigned to *every*-proposition in which they occur. This is the principle of the theory of denoting I wish to advocate: that denoting phrases never have any meaning in themselves, but that every proposition in whose verbal expression they occur has a meaning. The difficulties concerning denoting are, I believe, all the result of a wrong analysis of propositions whose verbal expressions contain denoting phrases. The proper analysis, if I am not mistaken, may be further set forth as follows.

[1] I have discussed this subject in *Principles of Mathematics*, chapter v., and § 476. The theory there advocated is very nearly the same as Frege's, and is quite different from the theory to be advocated in what follows.

[2] More exactly, a propositional function.

[3] The second of these can be defined by means of the first, if we take it to mean, "It is not true that 'C (x) is false' is always true".

[4] I shall sometimes use, instead of this complicated phrase, the phrase "C (x) is not always false," or "C (x) is sometimes true," supposed *defined* to mean the same as the complicated phrase.

Suppose now we wish to interpret the proposition, "I met a man". If this is true, I met some definite man; but that is not what I affirm. What I affirm is, according to the theory I advocate:—

"'I met x, and x is human' is not always false".

Generally, defining the class of men as the class of objects having the predicate *human*, we say that:—

"C (a man)" means "'C (x) and x is human' is not always false".

This leaves "a man," by itself, wholly destitute of meaning, but gives a meaning to every proposition in whose verbal expression "a man" occurs.

Consider next the proposition "all men are mortal". This proposition[1] is really hypothetical and states that *if* anything is a man, it is mortal. That is, it states that if x is a man, x is mortal, whatever x may be. Hence, substituting 'x is human' for 'x is a man,' we find:—

"All men are mortal" means "'If x is human, x is mortal' is always true".

This is what is expressed in symbolic logic by saying that "all men are mortal" means "'x is human' implies 'x is mortal' for all values of x". More generally, we say:—

"C (all men)" means "'If x is human, then C (x) is true' is always true".

Similarly

"C (no men)" means "'If x is human, then C (x) is false' is always true".

"C (some men)" will mean the same as "C (a man),"[2] and

"C (a man)" means "It is false that 'C (x) and x is human' is always false".

"C (every man)" will mean the same as "C (all men)".

It remains to interpret phrases containing *the*. These are by far the most interesting and difficult of denoting phrases. Take as an instance "the father of Charles II. was executed". This asserts that there was an x who was the father of Charles II. and was executed. Now *the*, when it is strictly used, involves uniqueness; we do, it is true, speak of "*the* son of So-and-so" even when So-and-so has several sons, but it would be more correct to say "*a* son of So-and-so". Thus for our purposes we take *the* as involving uniqueness. Thus when we say "x was *the* father of Charles II." we not only assert that x had a certain relation to Charles II., but also

[1] As has been ably argued in Mr. Bradley's *Logic*, book i., chap. ii.

[2] Psychologically "C (a man)" has a suggestion of *only one*, and "C (some men)" has a suggestion of *more than one*; but we may neglect these suggestions in a preliminary sketch.

that nothing else had this relation. The relation in question, without the assumption of uniqueness, and without any denoting phrases, is expressed by "x begat Charles II.". To get an equivalent of "x was the father of Charles II.," we must add, "If y is other than x, y did not beget Charles II.," or, what is equivalent, "If y begat Charles II., y is identical with x". Hence "x is the father of Charles II." becomes "x begat Charles II.; and 'if y begat Charles II., y is identical with x' is always true of y".

Thus "the father of Charles II. was executed" becomes:—

"It is not always false of x that x begat Charles II. and that x was executed and that 'if y begat Charles II., y is identical with x' is always true of y".

This may seem a somewhat incredible interpretation; but I am not at present giving reasons, I am merely *stating* the theory.

To interpret "C (the father of Charles II.)," where C stands for any statement about him, we have only to substitute C (x) for "x was executed" in the above. Observe that, according to the above interpretation, whatever statement C may be, "C (the father of Charles II.)" implies:—

"It is not always false of x that 'if y begat Charles II., y is identical with x' is always true of y,"

which is what is expressed in common language by "Charles II. had one father and no more". Consequently if this condition fails, *every* proposition of the form "C (the father of Charles II.)" is false. Thus *e.g.* every proposition of the form "C (the present King of France)" is false. This is a great advantage in the present theory. I shall show later that it is not contrary to the law of contradiction, as might be at first supposed.

The above gives a reduction of all propositions in which denoting phrases occur to forms in which no such phrases occur. Why it is imperative to effect such a reduction, the subsequent discussion will endeavour to show.

The evidence for the above theory is derived from the difficulties which seem unavoidable if we regard denoting phrases as standing for genuine constituents of the propositions in whose verbal expressions they occur. Of the possible theories which admit such constituents the simplest is that of Meinong.[1] This theory regards any grammatically correct denoting phrase as standing for an *object*. Thus "the present King of France," "the round square," etc., are

[1] See *Untersuchungen zur Gegenstandstheorie und Psychologie*, Leipzig, 1904, the first three articles (by Meinong, Ameseder and Mally respectively).

supposed to be genuine objects. It is admitted that such objects do not *subsist*, but nevertheless they are supposed to be objects. This is in itself a difficult view; but the chief objection is that such objects, admittedly, are apt to infringe the law of contradiction. It is contended, for example, that the existent present King of France exists, and also does not exist; that the round square is round, and also not round; etc. But this is intolerable; and if any theory can be found to avoid this result, it is surely to be preferred.

The above breach of the law of contradiction is avoided by Frege's theory. He distinguishes, in a denoting phrase, two elements, which we may call the *meaning* and the *denotation*.[1] Thus "the centre of mass of the Solar System at the beginning of the twentieth century" is highly complex in *meaning*, but its *denotation* is a certain point, which is simple. The Solar System, the twentieth century, etc., are constituents of the *meaning;* but the *denotation* has no constituents at all.[2] One advantage of this distinction is that it shows why it is often worth while to assert identity. If we say "Scott is the author of *Waverley*," we assert an identity of denotation with a difference of meaning. I shall, however, not repeat the grounds in favour of this theory, as I have urged its claims elsewhere (*loc. cit.*), and am now concerned to dispute those claims.

One of the first difficulties that confront us, when we adopt the view that denoting phrases *express* a meaning and *denote* a denotation,[3] concerns the cases in which the denotation appears to be absent. If we say "the King of England is bald," that is, it would seem, not a statement about the complex *meaning* "the King of England," but about the actual man denoted by the meaning. But now consider "the King of France is bald". By parity of form, this also ought to be about the denotation of the phrase "the King of France". But this phrase, though it has a *meaning* provided

[1] See his "Ueber Sinn und Bedeutung," *Zeitschrift für Phil. und Phil. Kritik*, vol. 100.

[2] Frege distinguishes the two elements of meaning and denotation everywhere, and not only in complex denoting phrases. Thus it is the *meanings* of the constituents of a denoting complex that enter into its *meaning*, not their *denotation*. In the proposition "Mont Blanc is over 1,000 metres high," it is, according to him, the *meaning* of "Mont Blanc," not the actual mountain, that is a constituent of the *meaning* of the proposition.

[3] In this theory, we shall say that the denoting phrase *expresses* a meaning; and we shall say both of the phrase and of the meaning that they *denote* a denotation. In the other theory, which I advocate, there is no *meaning*, and only sometimes a *denotation*.

"the King of England" has a meaning, has certainly no denotation, at least in any obvious sense. Hence one would suppose that "the King of France is bald" ought to be nonsense; but it is not nonsense, since it is plainly false. Or again consider such a proposition as the following: "If u is a class which has only one member, then that one member is a member of u," or, as we may state it, "If u is a unit class, *the* u is a u". This proposition ought to be *always* true, since the conclusion is true whenever the hypothesis is true. But "the u" is a denoting phrase, and it is the denotation, not the meaning, that is said to be a u. Now if u is *not* a unit class, "the u" seems to denote nothing; hence our proposition would seem to become nonsense as soon as u is not a unit class.

Now it is plain that such propositions do *not* become nonsense merely because their hypotheses are false. The King in "The Tempest" might say, "If Ferdinand is not drowned, Ferdinand is my only son". Now "my only son" is a denoting phrase, which, on the face of it, has a denotation when, and only when, I have exactly one son. But the above statement would nevertheless have remained true if Ferdinand had been in fact drowned. Thus we must either provide a denotation in cases in which it is at first sight absent, or we must abandon the view that the denotation is what is concerned in propositions which contain denoting phrases. The latter is the course that I advocate. The former course may be taken, as by Meinong, by admitting objects which do not subsist, and denying that they obey the law of contradiction; this, however, is to be avoided if possible. Another way of taking the same course (so far as our present alternative is concerned) is adopted by Frege, who provides by definition some purely conventional denotation for the cases in which otherwise there would be none. Thus "the King of France," is to denote the null-class; "the only son of Mr. So-and-so" (who has a fine family of ten), is to denote the class of all his sons; and so on. But this procedure, though it may not lead to actual logical error, is plainly artificial, and does not give an exact analysis of the matter. Thus if we allow that denoting phrases, in general, have the two sides of meaning and denotation, the cases where there seems to be no denotation cause difficulties both on the assumption that there really is a denotation and on the assumption that there really is none.

A logical theory may be tested by its capacity for dealing with puzzles, and it is a wholesome plan, in thinking about logic, to stock the mind with as many puzzles as possible,

since these serve much the same purpose as is served by experiments in physical science. I shall therefore state three puzzles which a theory as to denoting ought to be able to solve; and I shall show later that my theory solves them.

(1) If *a* is identical with *b*, whatever is true of the one is true of the other, and either may be substituted for the other in any proposition without altering the truth or falsehood of that proposition. Now George IV. wished to know whether Scott was the author of *Waverley;* and in fact Scott *was* the author of *Waverley.* Hence we may substitute *Scott* for *the author of* "*Waverley,*" and thereby prove that George IV. wished to know whether Scott was Scott. Yet an interest in the law of identity can hardly be attributed to the first gentleman of Europe.

(2) By the law of excluded middle, either "A is B" or "A is not B" must be true. Hence either "the present King of France is bald" or "the present King of France is not bald" must be true. Yet if we enumerated the things that are bald, and then the things that are not bald, we should not find the present King of France in either list. Hegelians, who love a synthesis, will probably conclude that he wears a wig.

(3) Consider the proposition "A differs from B". If this is true, there is a difference between A and B, which fact may be expressed in the form "the difference between A and B subsists". But if it is false that A differs from B, then there is no difference between A and B, which fact may be expressed in the form "the difference between A and B does not subsist". But how can a non-entity be the subject of a proposition? "I think, therefore I am" is no more evident than "I am the subject of a proposition, therefore I am," provided "I am" is taken to assert subsistence or being,[1] not existence. Hence, it would appear, it must always be self-contradictory to deny the being of anything; but we have seen, in connexion with Meinong, that to admit being also sometimes leads to contradictions. Thus if A and B do not differ, to suppose either that there is, or that there is not, such an object as "the difference between A and B" seems equally impossible.

The relation of the meaning to the denotation involves certain rather curious difficulties, which seem in themselves sufficient to prove that the theory which leads to such difficulties must be wrong.

When we wish to speak about the *meaning* of a denoting

[1] I use these as synonyms.

phrase, as opposed to its *denotation*, the natural mode of doing so is by inverted commas. Thus we say:—

The centre of mass of the Solar System is a point, not a denoting complex;

"The centre of mass of the Solar System" is a denoting complex, not a point.

Or again,

The first line of Gray's Elegy states a proposition.

"The first line of Gray's Elegy" does not state a proposition. Thus taking any denoting phrase, say C, we wish to consider the relation between C and "C," where the difference of the two is of the kind exemplified in the above two instances.

We say, to begin with, that when C occurs it is the *denotation* that we are speaking about; but when "C" occurs, it is the *meaning*. Now the relation of meaning and denotation is not merely linguistic through the phrase: there must be a logical relation involved, which we express by saying that the meaning denotes the denotation. But the difficulty which confronts us is that we cannot succeed in *both* preserving the connexion of meaning and denotation *and* preventing them from being one and the same; also that the meaning cannot be got at except by means of denoting phrases. This happens as follows.

The one phrase C was to have both meaning and denotation. But if we speak of "the meaning of C," that gives us the meaning (if any) of the denotation. "The meaning of the first line of Gray's Elegy" is the same as "The meaning of 'The curfew tolls the knell of parting day,'" and is not the same as "The meaning of 'the first line of Gray's Elegy'". Thus in order to get the meaning we want, we must speak not of "the meaning of C," but of "the meaning of 'C,'" which is the same as "C" by itself. Similarly "the denotation of C" does not mean the denotation we want, but means something which, if it denotes at all, denotes what is denoted by the denotation we want. For example, let "C" be "the denoting complex occurring in the second of the above instances". Then

C = "the first line of Gray's Elegy," and

the denotation of C = The curfew tolls the knell of parting day.

But what we *meant* to have as the denotation was "the first line of Gray's Elegy". Thus we have failed to get what we wanted.

The difficulty in speaking of the meaning of a denoting complex may be stated thus: The moment we put the complex in a proposition, the proposition is about the denotation;

and if we make a proposition in which the subject is "the meaning of C," then the subject is the meaning (if any) of the denotation, which was not intended. This leads us to say that, when we distinguish meaning and denotation, we must be dealing with the meaning: the meaning has denotation and is a complex, and there is not something other than the meaning, which can be called the complex, and be said to *have* both meaning and denotation. The right phrase, on the view in question, is that some meanings have denotations.

But this only makes our difficulty in speaking of meanings more evident. For suppose C is our complex; then we are to say that C *is* the meaning of the complex. Nevertheless, whenever C occurs without inverted commas, what is said is not true of the meaning, but only of the denotation, as when we say: The centre of mass of the Solar System is a point. Thus to speak of C itself, *i.e.*, to make a proposition about the meaning, our subject must not be C, but something which denotes C. Thus "C," which is what we use when we want to speak of the meaning, must be not the meaning, but something which denotes the meaning. And C must not be a constituent of this complex (as it is of "the meaning of C"); for if C occurs in the complex, it will be its denotation, not its meaning, that will occur, and there is no backward road from denotations to meanings, because every object can be denoted by an infinite number of different denoting phrases.

Thus it would seem that "C" and C are different entities, such that "C" denotes C; but this cannot be an explanation, because the relation of "C" to C remains wholly mysterious; and where are we to find the denoting complex "C" which is to denote C? Moreover, when C occurs in a proposition, it is not *only* the denotation that occurs (as we shall see in the next paragraph); yet, on the view in question, C is only the denotation, the meaning being wholly relegated to "C". This is an inextricable tangle, and seems to prove that the whole distinction of meaning and denotation has been wrongly conceived.

That the meaning is relevant when a denoting phrase occurs in a proposition is formally proved by the puzzle about the author of *Waverley*. The proposition "Scott was the author of *Waverley*" has a property not possessed by "Scott was Scott," namely the property that George IV. wished to know whether it was true. Thus the two are not identical propositions; hence the meaning of "the author of *Waverley*" must be relevant as well as the denotation, if we adhere to the point of view to which this distinction belongs.

Yet, as we have just seen, so long as we adhere to this point of view, we are compelled to hold that only the denotation can be relevant. Thus the point of view in question must be abandoned.

It remains to show how all the puzzles we have been considering are solved by the theory explained at the beginning of this article.

According to the view which I advocate, a denoting phrase is essentially *part* of a sentence, and does not, like most single words, have any significance on its own account. If I say "Scott was a man," that is a statement of the form "x was a man," and it has "Scott" for its subject. But if I say "the author of *Waverley* was a man," that is not a statement of the form "x was a man," and does not have "the author of *Waverley*" for its subject. Abbreviating the statement made at the beginning of this article, we may put, in place of "the author of *Waverley* was a man," the following: "One and only one entity wrote *Waverley*, and that one was a man". (This is not so strictly what is meant as what was said earlier; but it is easier to follow.) And speaking generally, suppose we wish to say that the author of *Waverley* had the property ϕ, what we wish to say is equivalent to "One and only one entity wrote *Waverley*, and that one had the property ϕ".

The explanation of *denotation* is now as follows. Every proposition in which "the author of *Waverley*" occurs being explained as above, the proposition "Scott was the author of *Waverley*" (*i.e.* "Scott was identical with the author of *Waverley*") becomes "One and only one entity wrote *Waverley*, and Scott was identical with that one"; or, reverting to the wholly explicit form: "It is not always false of x that x wrote *Waverley*, that it is always true of y that if y wrote *Waverley* y is identical with x, and that Scott is identical with x". Thus if "C" is a denoting phrase, it may happen that there is one entity x (there cannot be more than one) for which the proposition "x is identical with C" is true, this proposition being interpreted as above. We may then say that the entity x is the denotation of the phrase "C". Thus Scott is the denotation of "the author of *Waverley*". The "C" in inverted commas will be merely the *phrase*, not anything that can be called the *meaning*. The phrase *per se* has no meaning, because in any proposition in which it occurs the proposition, fully expressed, does not contain the phrase, which has been broken up.

The puzzle about George IV.'s curiosity is now seen to have a very simple solution. The proposition "Scott was

the author of *Waverley*," which was written out in its unabbreviated form in the preceding paragraph, does not contain any constituent "the author of *Waverley*" for which we could substitute "Scott". This does not interfere with the truth of inferences resulting from making what is *verbally* the substitution of "Scott" for "the author of *Waverley*," so long as "the author of *Waverley*" has what I call a *primary* occurrence in the proposition considered. The difference of primary and secondary occurrences of denoting phrases is as follows:—

When we say: "George IV. wished to know whether so-and-so," or when we say "So-and-so is surprising" or "So-and-so is true," etc., the "so-and-so" must be a proposition. Suppose now that "so-and-so" contains a denoting phrase. We may either eliminate this denoting phrase from the subordinate proposition "so-and-so," or from the whole proposition in which "so-and-so" is a mere constituent. Different propositions result according to which we do. I have heard of a touchy owner of a yacht to whom a guest, on first seeing it, remarked, "I thought your yacht was larger than it is"; and the owner replied, "No, my yacht is not larger than it is". What the guest meant was, "The size that I thought your yacht was is greater than the size your yacht is"; the meaning attributed to him is, "I thought the size of your yacht was greater than the size of your yacht". To return to George IV. and *Waverley*, when we say, "George IV. wished to know whether Scott was the author of *Waverley*," we normally mean "George IV. wished to know whether one and only one man wrote *Waverley* and Scott was that man"; but we *may* also mean: "One and only one man wrote *Waverley*, and George IV. wished to know whether Scott was that man". In the latter, "the author of *Waverley*" has a *primary* occurrence; in the former, a *secondary*. The latter might be expressed by "George IV. wished to know, concerning the man who in fact wrote *Waverley*, whether he was Scott". This would be true, for example, if George IV. had seen Scott at a distance, and had asked "Is that Scott?" A *secondary* occurrence of a denoting phrase may be defined as one in which the phrase occurs in a proposition p which is a mere constituent of the proposition we are considering, and the substitution for the denoting phrase is to be effected in p, not in the whole proposition concerned. The ambiguity as between primary and secondary occurrences is hard to avoid in language; but it does no harm if we are on our guard against it. In symbolic logic it is of course easily avoided.

The distinction of primary and secondary occurrences also enables us to deal with the question whether the present King of France is bald or not bald, and generally with the logical status of denoting phrases that denote nothing. If "C" is a denoting phrase, say "the term having the property F," then

"C has the property ϕ" means "one and only one term has the property F, and that one has the property ϕ".[1]

If now the property F belongs to no terms, or to several, it follows that "C has the property ϕ" is false for *all* values of ϕ. Thus "the present King of France is bald" is certainly false; and "the present King of France is not bald" is false if it means

"There is an entity which is now King of France and is not bald,"

but is true if it means

"It is false that there is an entity which is now King of France and is bald".

That is, "the King of France is not bald" is false if the occurrence of "the King of France" is *primary*, and true if it is *secondary*. Thus all propositions in which "the King of France" has a primary occurrence are false; the denials of such propositions are true, but in them "the King of France" has a secondary occurrence. Thus we escape the conclusion that the King of France has a wig.

We can now see also how to deny that there is such an object as the difference between A and B in the case when A and B do not differ. If A and B do differ, there is one and only one entity x such that "x is the difference between A and B" is a true proposition; if A and B do not differ, there is no such entity x. Thus according to the meaning of denotation lately explained, "the difference between A and B" has a denotation when A and B differ, but not otherwise. This difference applies to true and false propositions generally. If "a R b" stands for "a has the relation R to b," then when a R b is true, there is such an entity as the relation R between a and b; when a R b is false, there is no such entity. Thus out of any proposition we can make a denoting phrase, which denotes an entity if the proposition is true, but does not denote an entity if the proposition is false. *E.g.*, it is true (at least we will suppose so) that the earth revolves round the sun, and false that the sun revolves round the earth; hence "the revolution of the earth round the sun" denotes an

[1] This is the abbreviated, not the stricter, interpretation.

entity, while "the revolution of the sun round the earth" does not denote an entity.[1]

The whole realm of non-entities, such as "the round square," "the even prime other than 2," "Apollo," "Hamlet," etc., can now be satisfactorily dealt with. All these are denoting phrases which do not denote anything. A proposition about Apollo means what we get by substituting what the classical dictionary tells us is meant by Apollo, say "the sun-god". All propositions in which Apollo occurs are to be interpreted by the above rules for denoting phrases. If "Apollo" has a primary occurrence, the proposition containing the occurrence is false; if the occurrence is secondary, the proposition may be true. So again "the round square is round" means "there is one and only one entity x which is round and square, and that entity is round," which is a false proposition, not, as Meinong maintains, a true one. "The most perfect Being has all perfections; existence is a perfection; therefore the most perfect Being exists" becomes:—

"There is one and only one entity x which is most perfect; that one has all perfections; existence is a perfection; therefore that one exists". As a proof, this fails for want of a proof of the premiss "there is one and only one entity x which is most perfect".[2]

Mr. MacColl (MIND, N.S., No. 54, and again No. 55, p. 401) regards individuals as of two sorts, real and unreal; hence he defines the null-class as the class consisting of all unreal individuals. This assumes that such phrases as "the present King of France," which do not denote a real individual, do, nevertheless, denote an individual, but an unreal one. This is essentially Meinong's theory, which we have seen reason to reject because it conflicts with the law of contradiction. With our theory of denoting, we are able to hold that there are no unreal individuals; so that the null-class is the class containing no members, not the class containing as members all unreal individuals.

It is important to observe the effect of our theory on the interpretation of definitions which proceed by means of de-

[1] The propositions from which such entities are derived are not identical either with these entities or with the propositions that these entities have being.

[2] The argument can be made to prove validly that all members of the class of most perfect Beings exist; it can also be proved formally that this class cannot have *more* than one member; but, taking the definition of perfection as possession of all positive predicates, it can be proved almost equally formally that the class does not have even one member.

noting phrases. Most mathematical definitions are of this sort: for example, "$m-n$ means the number which, added to n, gives m". Thus $m-n$ is defined as meaning the same as a certain denoting phrase; but we agreed that denoting phrases have no meaning in isolation. Thus what the definition really ought to be is: "Any proposition containing $m-n$ is to mean the proposition which results from substituting for '$m-n$' 'the number which, added to n, gives m'". The resulting proposition is interpreted according to the rules already given for interpreting propositions whose verbal expression contains a denoting phrase. In the case where m and n are such that there is one and only one number x which, added to n, gives m, there is a number x which can be substituted for $m-n$ in any proposition containing $m-n$ without altering the truth or falsehood of the proposition. But in other cases, all propositions in which "$m-n$" has a primary occurrence are false.

The usefulness of *identity* is explained by the above theory. No one outside a logic-book ever wishes to say "x is x," and yet assertions of identity are often made in such forms as "Scott was the author of *Waverley*" or "thou art the man". The meaning of such propositions cannot be stated without the notion of identity, although they are not simply statements that Scott is identical with another term, the author of *Waverley*, or that thou art identical with another term, the man. The shortest statement of "Scott is the author of *Waverley*" seems to be: "Scott wrote *Waverley;* and it is always true of y that if y wrote *Waverley*, y is identical with Scott". It is in this way that identity enters into "Scott is the author of *Waverley*"; and it is owing to such uses that identity is worth affirming.

One interesting result of the above theory of denoting is this: when there is anything with which we do not have immediate acquaintance, but only definition by denoting phrases, then the propositions in which this thing is introduced by means of a denoting phrase do not really contain this thing as a constituent, but contain instead the constituents expressed by the several words of the denoting phrase. Thus in every proposition that we can apprehend (*i.e.* not only in those whose truth or falsehood we can judge of, but in all that we can think about), all the constituents are really entities with which we have immediate acquaintance. Now such things as matter (in the sense in which matter occurs in physics) and the minds of other people are known to us only by denoting phrases, *i.e.*, we are not *acquainted* with them, but we know them as what has such and such proper-

ties. Hence, although we can form propositional functions C (x) which must hold of such and such a material particle, or of So-and-so's mind, yet we are not acquainted with the propositions which affirm these things that we know must be true, because we cannot apprehend the actual entities concerned. What we know is "So-and-so has a mind which has such and such properties" but we do not know "A has such and such properties," where A *is* the mind in question. In such a case, we know the properties of a thing without having acquaintance with the thing itself, and without, consequently, knowing any single proposition of which the thing itself is a constituent.

Of the many other consequences of the view I have been advocating, I will say nothing. I will only beg the reader not to make up his mind against the view—as he might be tempted to do, on account of its apparently excessive complication—until he has attempted to construct a theory of his own on the subject of denotation. This attempt, I believe, will convince him that, whatever the true theory may be, it cannot have such a simplicity as one might have expected beforehand.

III.—PREDETERMINATION AND PERSONAL ENDEAVOUR.

By W. R. Boyce Gibson.

Is the actual itself completely rational and righteous, at any time, to such insight as can bear the discovery; or does the issue depend, in part at least, on what we contrive to make it?

In the attempt to deal with this fundamental query the reflexion does not lie far that the answer will be, *prima facie*, different according as the point of view of cognition or of volition is taken. To attempt to *know* anything the nature of which is not already in minutest detail independently existent of the thought that is to know it, would be to aspire to *invent* the truth instead of discovering it. On the other hand, to will what is already in nature predetermined is simply to acquiesce in the universe—a universe, by-the-by, in which the will is *ex hypothesi* superfluous and the acquiescence therefore a mere form. In a word, it is equally futile to suppose either that the desideratum of knowledge is not already predetermined or that the desideratum of will *is* already predetermined.

This is how the problem presents itself upon first reflexion, and Hegel himself adopts a very similar basis. "While Intelligence," he says, "merely proposes to take the world as it is, Will takes steps to make the world what it ought to be,"[1] and he agrees that the contention that "if the world were as it ought to be, the action of will would be at an end" gives correct expression to the *finitude* of will. But he goes on to maintain that when it has overcome the limits of this finitude, Will returns to the presupposition made by Cognition, and the unity of the theoretical and practical idea is achieved.

Here we have Hegel's Intellectualism clearly asserted. The reconciliation of the two diverse requirements of the

[1] *Logic* (tr. Wallace), p. 372.

Intellect and the Will is achieved only by coming round to the standpoint of the Intellect. "The consummation of the infinite End, therefore, consists merely in removing the illusion which makes it seem yet unaccomplished. The Good, the absolutely Good, is eternally accomplishing itself in the world: and the result is that it need not wait upon us, but is already by implication, *as well as in full actuality*, accomplished.[1] . . . All unsatisfied endeavour ceases, when we recognise that the final purpose of the world is accomplished no less than ever accomplishing itself." [2]

Thus, at the point of reconciliation of the theoretical and the practical Ideas, we still find that the End, the ultimate End, the goal of logical science and of all rational desire is just something that has to be discovered and acquiesced in, an eternal Good present *in toto* and in the minutest perfection of its nature even when thought has not got beyond its first abstract realisation of it.

Dr. McTaggart himself is forward in recognising the ultra-intellectual standpoint taken by Hegel. He starts from a very similar distinction between Intellect and Will, but reaches a different conclusion. His treatment of the relation of Knowledge to Volition is very lucidly put.[3] He conceives Volition and Knowledge as two concrete forms of conscious activity, and clearly notes their points of agreement and of difference. Both are purposive activities, "activities which strive to bring about a harmony between the conscious self and its surroundings".[4] "But," he adds, "in the manner in which they do this they are the direct antitheses of one another." "The one demands that the subject shall conform to the object, while the other demands that the object shall conform to the subject." And the reason for this difference is that though both have purposive functions, the aim of the one is the True, and the aim of the other the Good. In "The Further Determination of the Absolute" this distinction is stated in a still more definite form: "In knowledge," we read, "we accept the facts as valid, and condemn our ideas if they do not agree with the facts; in volition we accept our ideas as valid, and condemn the facts if they do not agree

[1] *Logic* (tr. Wallace), pp. 351-352. [2] P. 373.

[3] It is developed in a chapter of his *Studies in the Hegelian Dialectic*, entitled "The Final Result of the Dialectic," and he returns upon it both in the last chapter of his *Studies in Hegelian Cosmology*, the chapter entitled "The Further Determination of the Absolute," and again in an Article in MIND, April, 1900, entitled "Hegel's Treatment of the Categories of the Idea".

[4] *Studies in the Hegelian Dialectic*, p. 215.

with our ideas".[1] "Our desires," he adds, a little farther on, "must serve in the kingdom of the true; they rule in the kingdom of the good."[2]

In attempting to adjust these rival claims of our spiritual being, Dr. McTaggart does not follow Hegel in yielding the primacy to the Intellect. He subjects both Knowledge and Volition to a searching analysis, and finds revealed in each certain radical inadequacies incompatible with the requirements of the Ultimate Idea; he therefore discards them both. He concludes that the true harmony of Knowledge and Volition is to be found in Emotion, in the emotion of Love.

If this solution were really a solution, it would have our human feeling wholly in its favour. But it does not meet the difficulty we are considering. Dr. McTaggart's "Love" is an emotion that lies beyond both Knowledge and Will, and, therefore, presumably also beyond Good and Evil. The solution is frankly mystical, and Dr. McTaggart confesses that it is. It does not solve any antagonisms between Knowledge and Will, and needs all its author's powerful resources to keep it from vanishing away into the realm of the Inconceivable. "Love" *may* be the last word of Metaphysics, and Emotion well controlled might be in a very genuine human sense construed as a reconciliation of the intellectual and volitional tendencies of our nature; but as Dr. McTaggart conceives it, its mystical and superhuman function renders it powerless for good or for evil.

I pass on now to a somewhat different solution of the conflicting claims of Knowledge and Volition. I would insist here on the following main points:—

(I.) That Knowledge is itself rooted in volition.

(II.) That this insight, though an essential first step, does not yield the solution we are seeking. The solution can be found only through firmly realising the distinction between Knowledge of Objects and Self-knowledge.

I. Knowledge is Rooted in Volition.

Dr. McTaggart's distinction between Knowledge and Volition leaves him, as we saw, with an opposition between two fundamental aspects of purposive activity, the receptive and the creative, which drives him to seek a point of reconciliation *beyond* them both. But the remedy lies already within Dr. McTaggart's grasp, for the "purposive activity" common

[1] *Studies in Hegelian Cosmology*, p. 265. [2] P. 267.

to both the aspects Dr. McTaggart deals with is surely no mere abstract character each happens to possess in common, but the root principle of both. Further, a purposive activity that accepts its ideas as valid, and condemns the facts if they do not agree with these ideas, is a purposive activity that insists on acting itself out. The so-called opposition between Knowledge and Volition thus reduces itself to the opposition between a purposive activity that knows and a purposive activity that acts, to an opposition, that is, between Knowledge and *Action*. But Knowledge and Action, far from being opposed tendencies of our nature, are rather supplementary stages of our purposive activity, the central conception of Volition covering and vitalising both. The volition in which knowledge is rooted seeks, eventually, expression in action, an action which not only aims at achieving a *good*, but also at fully expressing the *truth* of the will in which it originates.

The importance of so conceiving the relation of Knowledge to Volition lies essentially in this that it extends our conception of the meaning of knowledge, by offering us a more fundamental ideal than that of knowing the truth about objects. For Knowledge, as Dr. McTaggart deals with it, means for him Knowledge of Objects. The knowledge that adopts the purely receptive attitude, though it may resemble in nothing the passive plasticity proper to a *tabula rasa*, though it be instinct with preperceptions and alive with hypotheses, is still by the very necessity of its receptive attitude, of its desire to subordinate ideas to facts, a mere knowledge of objects. But this is only one kind of knowledge, a knowledge which approaches its material tentatively from without. Now the use of the term "knowledge" in dissociation from volition serves to perpetuate this narrow conception of knowledge: for "knowledge" has come to be an abbreviated equivalent for "knowledge of objects". But volition in relation to knowledge is *the will to realise the truth*, and such volition carries us beyond knowledge of objects in two directions:—

1. It carries us on from knowledge to action, for knowledge can only express itself faithfully through action; knowledge of objects culminating in πρᾶξις, the action of industry in one form or another; knowledge of Self expressing itself in Art and Conduct as a ποίησις. This brings us back to the old Greek conviction that the Good is not an ideal distinct from the True, but Truth in action, the definition of the Good being, shall we say, the personal or the *felt* realisation of the True.

2. It carries us beyond knowledge of Objects to a Self-

knowledge which is not the knowledge of an Object but the knowledge of Self as Self, of spirit as spirit. For only in such knowledge can we realise the truth of that *will to know* in which all our intellectual insight is rooted.

The conception of Self-apprehension here suggested may require some preliminary elucidation. There are, as I take it, three main types of Observation :—

(1) The *physical* or non-introspective observation of *nature*, in which objects are observed in their relations to other objects : this we may call Sense-Perception.

(2) The *presentational* form of introspective observation,[1] in which what we observe are objects as presented *to* the introspecting subject. This we may call Sensory Introspection, whether immediate or retrospective.

(3) The spiritual intuition of self-consciousness, in which our subjective activities and the self of which these are but the specifications are *realised* in their immediacy as subjective activities. Here the subject, whether in self-introspection or in self-retrospection, no longer knows itself as object but as subject. It is the point of view of the experient. Self-introspection means realisation. Self-retrospection means re-realisation under the conditions of present reflexion.

The position that psychological method necessitates our studying our minds as objects has been consistently worked out by Prof. James who finds that the self-object is a complex of sensations and the self-subject a postulate.[2]

Mr. Bradley points out very plainly that we *are* aware, in introspection, of our subjective activities as such ; that these are still contents of consciousness, though not objects put before the mind, and yet he fails to realise that this extension of the content of Introspection involves any change in psychological method. The truth however seems to be that in so far as self-consciousness is central in Psychology, the psychological point of view must be that of the *experient*, and the method, as in Prof. Stout's elaboration of his theory of Conation, *developmental*. Self-Consciousness, which is the form of observation upon which Self-knowledge is built up, is an awareness which is simultaneously a realisation. It is self-realisation in its immediacy. Whereas in sensory intro-

[1] (2) and (3) concern the observation not of *nature* but of *experience*.

[2] It is true that in following up another method, the pragmatic, Prof. James has maintained a much more inspired conception of the Self as the *fons et origo* of all reality. I refer to the humanistic view of Personality, developed in the well-known chapter on 'Belief' and in the *Will to Believe*. But this constructive philosophy of the Self still lacks a convincing foundation. A mere postulate cannot possibly sustain it.

spection the sensory content, be it sensation or image, is *presented* to the introspecting subject, in Self-consciousness the spiritual or active content is *present* to the introspecting subject, present to it as a *subject*-matter, as a specification of itself. The thought of thought in its immediacy is not the thought *about* thought, thought being itself its own *object*, but the *cogito ergo sum*, the import of which, as Descartes understood it, might be stated as follows: "As a *self-conscious* being I have the intuitive certainty of my own *existence*".[1]

To sum up. The will to know is the common root both of our knowledge of objects and our knowledge of self and its subjective activities; and also of the felt Good which comes through the realisation of such Knowledge in some form of Action. Will defines itself through cognition and still more completely through the further determination of cognition in Art and Conduct. This must be our starting-point in working towards a solution of the question at issue, which, as we have seen, is briefly this: Is the Truth we seek after already accomplished, or does its final significance and value depend to any extent upon our own pursuit of it?

II. Self-Knowledge is not Knowledge of the Predetermined.

The previous discussion has already brought us one stage forward. It has prepared us to admit, even on the assumption that all Truth is already accomplished and calls for nothing beyond discovery or re-discovery, that its significance and value for *us* at least does depend on our pursuit of it. For to *discover* truth is *eo ipso* to realise it; hence, in one clear sense at least, *qua* truth realised by the individual human thinker, the perfect end is *not* present in the imperfect beginning. Hence, whatever be the type of knowledge in question, we are quite justified in urging, in answer to the assertion that the "Is to be" exists already, that as we have not yet realised it ourselves, it has still to exist in richer, fuller form. Perfection must mean experienced perfection, and until all creatures capable of experiencing perfection, of realising truth and goodness, are doing so, the perfect still falls short of its complete realisation.

The Intellectualists' answer to this kind of appeal is well known. It consists in maintaining the absolute irrelevancy of personal realisation. The truth is there, they say, whether

[1] A fuller treatment of this question will be found in the *Proceedings of the Aristotelian Society*, 1904-5, under the paper entitled "Self-Introspection".

you realise it or not. Your subjective realisation of it is your own affair and does not concern the objective truth. The law of gravitation holds good whether you do, or do not, happen to realise its significance. "Thought," they go on to say, in rapt Hegelian strain, "has a nature of its own which does not depend on me or you. The Logos is lord of its own perfections; these you may imperfectly realise for yourself if you are sufficiently assiduous in the search after truth. But your realisation of them can neither steal them away nor bring them into being."

These pontifical claims cannot be met by any argument which does not do justice to the truth they represent. Let us take the following passage from Mr. Bradley's article "On Truth and Practice" (in the July number of MIND, 1904). "Everywhere in conation and will there is an idea which is opposed to existence. And this existence nowhere is characterless, but it is a determinate being. And the character of this being again is not something inert. On the contrary it is an element in the whole situation, and it dictates to my idea as well as submits to dictation. If my idea is the right one, and if it works, this, we may say, is because the nature of the whole situation selected it. My idea, I agree, then reacts, and I agree that it then makes the situation to be different. But to speak as if the entire nature of the situation were first made by the idea seems really extravagant. If my idea is to work, it must correspond to a determinate being which it cannot be said to make. And in this correspondence, I must hold, consists from the very first the essence of truth." Here we have the Intellectualist claim asserted with, apparently, every reasonable reservation in favour of the pragmatic contentions. And yet Mr. Schiller is somehow not satisfied. Commenting on this passage (in the October number of MIND, 1904, p. 530), he says: "Let us pass to a still more perplexing subject, Mr. Bradley's handling of the subjective activity in the apprehension of 'fact'. For 'truth,' it seems, is after all not mere reproduction of 'fact,' the 'right' idea is not merely 'dictated,' it has also to be 'chosen' (p. 311). How then, we ask, can this hapless Truth serve two such different masters? How can it on the one hand adjust itself to human demands and interests, and yet on the other slavishly copy and respectfully produce a congenitally 'outer' and already pre-existing 'fact'? . . . We get then this dilemma:[1] if our 'choice,' 'selection' or *congé d'élire* does not affect

[1] P. 531.

the rigidity of 'fact,' it is an illusion which ought not even to seem to exist, and we have certainly no right to talk about it: if on the other hand there really is 'selection' (as is asserted), will it not stultify the assertion of a rigid fact, introduce a possibility of *arbitrary* manipulation and lead to *alternative* constructions of reality?"

Now I am partially convinced both by Mr. Schiller's voluntaristic dilemma and Mr. Bradley's intellectualistic convictions. I quite believe, with Mr. Bradley, that "selection" is sometimes perfectly possible and not in any sense illusory where there are *no* alternative constructions of reality. We can select our hypotheses with a view to testing them at the touchstone of that most rigid fact we call "Nature". So much must surely be granted. On the other hand it does not seem possible to follow Mr. Bradley any further. In the first place, I do not believe that the truth-problem under any of its aspects can in last resort dispense with a reference to personal realisation. Where, as in the work of Natural Science, the aim is to bring theory into correspondence with fact, such correspondence, to be a truth at all, must be a truth *for* a person, must be personally appropriated and personally valued; and this general consideration affects the solution of the question concerning predeterminism in the manner already described.

But waiving this objection, so as to leave Mr. Bradley's conception of truth in its most convincing light, there still remains as a further and more vital objection that the conception takes only one type of knowledge into account. The essence of truth, says Mr. Bradley, consists in this, that, "if my idea is to work, it must correspond to a determinate being which it cannot be said to make". This is the essence of a certain type of truth, but not of every type of truth. In a word, I believe that one main source of misunderstanding between the intellectualist and the pragmatist to-day lies in the failure to make and abide by the fundamental distinction of Knowledge of Objects and Self-knowledge, Knowledge of Things and Knowledge of Persons, and to see that truth means one thing in the one case and another thing in the other. In so far as we are dealing with Knowledge of Objects, the predeterministic attitude of Mr. Bradley appears to me to be unassailable. Laws of Nature are discovered, not invented, and our hypotheses break themselves constantly upon a rigid fact that selects *them*.

But it appears to me quite otherwise when we pass from Knowledge of Nature to Knowledge of Experience, from Knowledge of Objects to Self-knowledge. Once we definitely

admit that this self-observation is of subject by subject, and that this is equivalent to a self-realisation, the two functions of self-existence and self-knowledge coalesce into the single function of self-realisation. And here knowledge is no longer knowledge of the predetermined. It is knowledge of the self-determined, of the yet-to-be-determined, a very different thing. We must look at this point closely, for the issues are important. And let us start with a very natural, indeed inevitable objection from the Bradleian side.

That we can only experience and truly observe ourselves as *subjects* may be perfectly true. This our objector may be prepared to grant. But he will go on to insist that the nature of Self-knowledge through Psychology and Philosophy will still remain essentially the same as knowledge of objects. He may allow that this self-awareness or self-consciousness is always a self-experience, a personal experience, and that a true Theory of Mind must take such personal experience, as such, as its datum. But surely, he will say, the experience is antecedent to the theory and Hegel's famous reference to the Owl of Athene in his Philosophy of Law still expresses the truth of the situation. Philosophy like Science must paint its grey in grey; Theory still presupposes Fact whether that Fact be Nature or Experience, and the truth of theory can never do more than just uncover some pre-existing truth of fact.

Here again we are prepared to acknowledge most fully the element of truth in this objection. The truth of a theory of human nature from the most central point of view conceivable must presuppose the nature of which it is the theory. And this applies as truly to Hegel's dialectical Theory of Spirit, and to Stout's Conation-Theory as it does to Newton's Theory of Gravitation or the Atomic Theory of Dalton. We admit most readily, indeed would insist upon it, that there is nothing that spirit can realise which is not at the same time a realisation of its own nature. When a spirit has fully realised all that it is capable of by nature, there will be nothing more to realise.

But there is a difference. We agree that the law of gravitation *is* actually operative in the falling stone and to discover it is to discover what was true of the stone's behaviour all along. But that an ideal of perfection necessarily antedates its realisation by the subject who pursues it is to take the metaphor of pursuit too literally, as though to realise an ideal were just to *catch* something at last that had all along been quite independent of our own selves, the pursuers. Now what a Theory of Mind does bring to the front

as present in and throughout all striving is the "Ought" or the Demand of the Ideal upon our spiritual effort. And the "Ought," we say with Kant, presupposes the "Can". But must we go further and say, "The Can presupposes the Is"? For our own part we hold that the "Ought" presupposes the "Can" but not the "Is".

What then *is* the motive power if it is not the already actualised Ideal? The motive in self-realisation, we answer, lies neither in a mere idea, a mere authoritative "ought to be" external to our own striving, nor in an already accomplished Ideal that seeks to realise itself afresh and recapture some temporarily surrendered perfection through a finite Self as medium. The motive to further advance in the direction of the true lies just in the meaning and the value, the organised dynamic power which the love of Truth has come to possess over the various functions of our nature, our feelings, imagination and will. If we call the Idea of Truth a spiritual principle, *i.e.*, a final cause in so far as it gives to the life "a bond of unity and possesses an internal source of development,"[1] then we may say that the spiritual principle is present and effective just in so far as it has already unified our life and furthered its spiritual development. Truth, the motive, is truth as so far realised by us and organised in us.

But there is yet a further point. We have so far accepted the conception of Truth as the truth, the realised truth, of a Theory. But the question "What is truth?" requires in my opinion to be set and answered afresh from the point of view of the personal experient.

When facts of nature are brought under laws, we say, rightly, that their truth is being discovered, that they are surrendering to us the secret of the unity and order of the universe, and that a chaos is being made a cosmos. But when facts of experience are theorised, when the life of mind for instance is made clearer through a theory of it, *e.g.*, Stout's Conation theory, can we say with the same confidence that this systematised extract of conscious experience is the *truth* of that experience? Can the truth *about* the experient be accepted by the experient who knows himself as such, as the most satisfactory result of his own self-knowledge? When we have learnt the truth about a *thing* so that we can, in the light of such acquired truth, entirely control it, the truth-instinct is satisfied. Is the truth-instinct equally satisfied when we have learnt the whole truth *about* ourselves?

[1] Hegel, *Logic*, p. 24.

The answer must surely be that the truth of life, the truth of experience, the truth as it is *for* ourselves is something vastly more precious, that this alone is the concrete truth, and all the rest is abstract. The truth as it is for the experient is more truly truth than the truth as it is for the theorist, however true that theory may be.

And this concreter view of truth is the logical issue of our first position, that knowledge is rooted in Volition, and that Will defines itself through cognition and still further through the subsequent determination of cognition in Art and Conduct. Knowledge, in its usual acceptation of an impersonal systematic whole of ideas, may refuse in its own best interests to pass beyond the organised symbolic languages through which it interprets and illumines the realms of nature and experience; but Volition cannot stop short of experience itself. It passes into life; and knowledge, as the wisdom of life in action, passes along with it. And truth, the truth of self-conscious social and religious life, truth as willed and felt and organised, not in theory only but also in life, the truth as it is *for* the truth-seeker and the truth-finder, this is the profoundest truth of all.

Let us consider this same conception of truth once again from the point of view of the fact that we can only know the spiritual *as* spiritual, the subject as subject. From this point of view, and from this point of view *only*, the principle and the final cause are one. The truth-principle is here the spiritual principle and neither is anything abstract or indifferent to human feeling and volition. From the standpoint of the experient,—the only possible standpoint from which to understand the true meaning of spirit,—Truth is Spirit, the realised satisfaction of our spiritual nature, and the search after truth is, *centrally*, the expression of our will to realise personally a perfected spiritual experience. And here there is every reason to believe,—and we must believe it if personal freedom is to be more than a name,—that we hold before us, in spiritual prospect, "alternative constructions of reality". What the reality we call "truth" is to be for us depends on our construction of it. There are as many perfections attainable, I believe, as there are spirits to realise them. What spiritual virtue is there in homogeneity? "Perfect in its way," we say, and I believe that we shall say this to the end.

From this concreter level of thought we may readily grant that there is a profound suggestion of truth in the view that a perfect insight into the universe would reveal it as perfect. For if there is no perfect insight apart from a perfected life,

if perfect sympathy, for instance, is essential to perfect insight, so that no one could see perfection in himself so long as there was any imperfection elsewhere to be redeemed, then the perfect insight is, under present conditions, a sheer impossibility, and to call it a desideratum for present experience is to desire the intrinsically unrealisable. The first desideratum is the perfect experience; this gained, the perfect insight will be added unto it. Such perfect insight can surely be man's insight only when his first labour is accomplished, and progress means no longer progress *towards* perfection, but progress *in* perfection.

An objection may yet be raised to the foregoing on the old ground that the activity of pure thought and of all that is essentially spiritual is timeless. It is true that Hegel speaks of his dialectic as a timeless development and Dr. McTaggart accepts it as such. If by this we mean, however, development that takes place out of time—a will-o'-the-wisp that is responsible for much visionary speculation in philosophy—I confess that the idea is totally unintelligible to me. But I do not believe that Hegel really means this. I do not believe that Hegel expects us to lift ourselves as thinkers out of the time-order altogether, but simply to hold the vision of pure thought outside the change-order; to think of thought, not as this or that thought bound up with a time-content, and leading by laws of association to another and yet to another thought, but as developing itself logically and therefore freely. A thought-system that in its connexions is independent of time-changes and so indifferent to time, is one thing; a thought-system that exists and develops timelessly another thing, and to me something quite inconceivable. If the concrete idea is held to be "present" in this timeless sense with the abstract idea, the reverse is equally true, and the notion of a development from one to the other ceases to have any meaning. If we give up the idea of time, we must give up that of development.

I cannot close the discussion of this fundamental subject without alluding to a solution which to some may have loomed large from the very outset, and which the concrete interpretation of truth as spiritual realisation may have seemed to render still more inevitable. Is not God Himself the Truth? And in a lesser way do not all our friends, and all whom we in any way esteem, and all the great and good who relive in our imagination and our love's devotion conspire to exercise upon our developing thought a strong spiritual pressure which, in the case of the divine intimacy, is the very pressure of perfection itself upon our imperfect

striving? It is of the very essence of religious faith and hope, and I believe also of philosophic conviction, to hold that this is so. But I do not consider that this spiritual pressure simply works itself out through our personal striving back into its own primitive perfection. I believe that every perfected life is a fresh conquest of spirit, and that, whether we say that God wins it for us or that we win it for God, it is still our experience, our own spiritual construction. In this sense a realised personality is always, as I take it, an enrichment of the more perfect spiritual presences that were its inspiration. It is *still* true that the final purpose of the world is accomplishing itself: it cannot be true that it is already in any sense accomplished, and that our freedom is simply God's way of passing back through Time and Chance, through Pain and Sin, to a perfect issue which, either in fact or in prospect, eternally WAS from the foundation of the world.

IV.—IS HUMANISM A PHILOSOPHICAL ADVANCE?

By S. H. Mellone.

A critic has no right to criticise unless he himself adopts and consistently abides by some intelligible position. Before, then, I proceed to consider critically (and I hope sympathetically) the doctrines recently developed under the names of Pragmatism and Humanism, I may ask permission to quote a few passages which, written some years ago (1897), will perhaps bear repetition in view of present tendencies in philosophy,[1] and which will suggest the point of view from which I regard "the new doctrines".

"Our knowledge of the general nature of reality depends in the end on our knowledge of or insight into the nature of man in its manifold forms: there the deepest nature of all reality is revealed so far as it is revealed at all. But this acknowledgment is futile, unless we also recognise that our knowledge of man's 'nature'—of man's essential qualities in themselves and in their results—is capable of indefinitely various degrees of truth; the truer, the wider and deeper it is, the further it goes towards solving the problem of existence; in its superficial forms such knowledge may have practically no bearing on this problem at all. What then is man's most characteristic quality, what is, at once, practically and theoretically, most *significant* in his experience? Some urge that it is Will, Activity, or Effort, conceived as a kind of push or impulse onwards; others urge that it is Feeling which not only prompts our actions but directs our judgments; others argue that it must be Thought. I contend that no progress can be made until it is recognised that not one of these three can be opposed to the others; human existence or experience cannot be interpreted in terms of one of these unless the others are made of equal importance with that one. If Thought is opposed to Emotion and Will, it

[1] Mellone, *Philosophical Criticism and Construction*, Pref., pp. ix.-xii.

cannot be our most real function, for Life includes more than can be accounted for by Logic, in any sense of this term. If Will—in opposition to Intelligence—is made the basal principle of our nature, then such a theory when consistent must regard this Will as blind and aimless, and therefore results in a pessimism more hopeless than that which founds itself on the fact of pain and failure: for the striving is aimless and yet by our very nature inevitable—we are its victims; or if the theory supposes that such a Will can be overcome or in some way laid to rest, this surely proves that it is not the deepest principle in us; for that by which we overcome it is nearer to the roots of our being. If Feeling is made 'the principal thing,' and therefore made the standard of worth as regards conduct and ultimately as regards truth, then we are left in a state of perfect anarchy, unless there is some standard by which the relative worth of Feelings themselves may be judged. As a matter of fact, both the Will-theory and the Feeling-theory admit the presence of Intelligence in us; but by Intelligence they understand a faculty capable only of operations of which counting or calculation is a type—capable only of arranging facts given to it from sources independent of itself, and of arranging them only according to limited principles. Thought cannot be thus limited; it is itself a living, creative function. On the other hand, if Thought is not opposed to Emotion and Will but is made somehow to include them, then we have the confusions resulting from the use of a word in a strained, unnatural sense—a sense inconsistent with many of the associations which are inseparable from the word through its use in ordinary language. This double-faced theory results in the bias of Intellectualism. We do not correct intellectualism by opposing Emotion and Will to Thought, assuming that reality is found in them *more* than in Thought and that we are before all things active and feeling beings; but by regarding even our deepest knowledge of these three (in their distinction and relation) as itself only symbolic and partially true; so that the three functions become three inseparable and equally incomplete symbols of what man verily is. Our most perfect knowledge is only the most perfect symbol of what we are—the most perfect yet attained."

With the foregoing, the following principles may now be connected. There can be no knowledge *without* experience. But (1) experience is susceptible of indefinitely various forms and degrees, from the sentient experience of a mollusc to the experience described in Hegel's *Phenomenologie des Geistes*. (2) In each form of human experience there is revealed in

some degree a constitution or structure which is, relatively to us, permanent or abiding. (3) One essential condition of these varieties of experience is our own activity; our experience is partly *made* by us as well as *found*. (4) Experience is blind unless intelligence supervenes to interpret it, when it becomes intelligent experience. These principles imply the impossibility of *separating* experience and reason,—of relying on one to the exclusion of the other; the necessity of *distinguishing* experience and reason, for there is an endless variety in the forms of rationality among men, so that experience and its interpretation are, so to speak, "independent variables"; and finally the value of activity and energy of spirit in moulding experience and so affording new data for knowledge.

There are not many harder intellectual feats than to keep in mind together and take account at the same time of a number of simultaneously varying conditions which are not so completely dependent on each other as to enable us to *infer* from one of them the variations of any of the others. The mathematical notation for a function of variables $f(x,y,z)$ gives some indication of the nature of the conception to which we refer. It is one which arises frequently in Economics (where phenomena have to be considered as determined by numerous conditions all varying at once) and in Philosophy. In such cases ordinary language affords only the most cumbrous and involved expression for the complex conceptions which have to be employed. These remarks are suggested to me by the extraordinary difficulty which is and has been found in doing justice to the fulness of man's concrete mental life. There are cases where to deal with one thing at a time is in effect to explain away other things of equal importance; such a case is that of the three most general modes distinguishable in concrete mental life. By concentrating attention on one of the three variables we tend to reduce the function to $f(x)$ instead of $f(x,y,z)$.

The older "Idealism," claiming descent from German thought, whatever the intentions of its exponents may have been, did in effect mutilate the totality of experience which it is the business of philosophy to interpret. It took one phase of mental life and built upon that as if it were the whole. The partisans of "Idealism" did, it is true, sometimes expressly protest against this mutilation, and declare that "feeling, knowing, and willing, are simply three aspects of one self-conscious being," "logically distinguishable but really inseparable modes of viewing the one self-conscious subject," for "there are no absolute separations in reality,

but only distinctions within an identity".[1] But as soon as it became necessary to reduce the vagueness of such formulæ, we were told that, on pain of incurring the philosophic *anathema*, we must believe that there is no element in the self-conscious life of man which cannot "fall within thought".[2]

The principle is well expressed in Dr. Edward Caird's words: "If we could know the whole conditions of an object apart from perception, we should know its reality,"[3] for if this is not a mere verbal proposition, it means that a complete knowledge of the conditions of a thing's possibility would be equivalent to its reality. "Idealism" always and everywhere persisted in naming the identity within which the differences hold, by reference to *one* of the aspects of self-conscious life in preference to the others. The principle constitutive of reality was always spoken of as *par excellence* Thought. And those who objected to this easy identification were accused of holding that reality is "not rational".

Another and of course a related point in which the older "Idealism" invited criticism was with regard to its treatment of Perception from the point of view of the Theory of Knowledge. It developed Berkeley's position from *esse* is *percipi* into *esse* is *concipi*. Against this it was contended that such a method was wholly inadequate to establish any metaphysical principle. It was to burke the primary problem of the Theory of Knowledge, and to render impossible that patient analysis by which alone any results could be securely established. There were some critics who proposed to open up another way, whatever it might lead to; and they contended that no progress will be made with the analysis of intelligence until we have probed to the bottom what they called "the reference to reality other than self". They held that there never was a time in the conscious life of any individual, when he recognised his ideas as being his own, and yet did not just as spontaneously recognise and accept their reference to reality other than his finite self; and accordingly they found the primary meaning of "real" to be, "that which does not depend on my finite ideas". Against this, various charges were made by the exponents of "Idealism,"—that it was to assume a self-contained subject, or an absolute dualism between mind and matter, or a multiplicity of self-existent "reals," or an

[1] Prof. Watson in the *International Journal of Ethics*, July, 1899, pp. 423, 424.

[2] *Ibid.*, p. 427. [3] *Philosophy of Kant*, vol. i., p. 598.

unknowable thing-in-itself. All such charges seemed futile to the critics, for they expressly defined the conception of reality, to which this preliminary inquiry led, in the most general terms, as indicated above; for the expression "does not depend for its existence upon" is not the same as "unrelated to" or "unaffected by" or "dissimilar in nature to". The first of these conceptions was given as *the least* that reality can mean, and as so far consistent with many different forms of metaphysical theory.[1] The whole process of knowledge seemed to consist in a gradual "filling in" and progressive definition of this abstract idea.

"Idealism," then, seemed open to the charges (*a*) of explaining away emotion and will into forms of thought, (*b*) of explaining away the necessary duality of subject and object by denying that the latter is in any sense whatever independent of the subject's thought about it. Corresponding to these two difficulties, there are two questions which the exponents of Humanism have not yet properly faced, but which will have to be thoroughly discussed before the worth of the "new" philosophy can be estimated at all; these are: (*a*) Does Humanism in effect—for declarations of good intentions are not sufficient—does it in effect explain away intellect into emotion and will? (*b*) Does Humanism in effect deny to the object any independence of the subject's will and action on it? Until these difficulties have been fully dealt with, Humanism leaves us with the same ambiguities in our hands as did the Absolute Idealism which it claims to replace.

Before coming to these questions, we must notice carefully that Hegelian "Idealism" has prepared the way for an advance in philosophic method and metaphysical conceptions by a vital contribution which it has made to the Theory of Knowledge. Truth is an organic whole. No portion of knowledge is *theoretically certain* or *absolutely true* until all portions have been so extended and developed that they can be seen to form a single, complete, all-inclusive whole. Such would be omniscience, and the idea of omniscience is irreconcilable with a growing, developing personality such as ours. Theoretical certainty cannot be attributed to any judgment that we can make. Some Hegelians might seek to avoid this conclusion by falling back on the view of man as "infinite or absolute as well as finite"; but our finite intellect, with its processes of change, evolution and growth,

[1] See *Philosophical Criticism*, ch. i., esp. §§ 2, 3 and 4, for full discussion and references.

is the only means of *access* to the absolute truth, which must needs be broken up into partial errors in order to manifest itself in the finite. In brief: all our judgments fall short of the whole truth; every judgment is therefore theoretically uncertain, inasmuch as we do not know how far it must be transformed in order to be developed into the whole truth. It is not therefore false; we must accept it if it is the best account which we can now form of the realities to which it refers. The more complete truth does not destroy the less complete, but expands and transforms it. Hence, conclusions which will work if taken as containing truth in solution as it were, become unworkable and even self-contradictory if taken as absolutely true. Criticism of any theory may be perfectly valid in the latter view of its truth, and yet be worthless on the former view of it, because an entirely wrong standard is employed. This result has been worked out in different ways by Bradley, Wallace and others. In Wallace's thought we find what is probably the purest example of its significance; and, by way of illustration, and not as an *argumentum ad hominem*, I quote the following admirable summary:[1] "In all systems, schools, dogmas, tendencies, there are elements of truth, but all have in them inherent defects, limitations, one-sidednesses, which necessarily lead on to some other, it may be opposite, development, which equally in turn has to be transcended. Nowhere in the history of philosophy can the searcher after truth find a bit of solid ground on which the sole of his foot may rest. It is not merely that no one system can be accepted as a whole, but no truth is so well-established that it may not easily degenerate into an error calling for fresh protest. . . . We encounter nothing but phases, tendencies, aspects. So subtle is the essence which alone this attitude of mind finds it possible to distil from the whole process that it can hardly be put into words at all. It can only be suggested or hinted at by the criticism of other people's mistakes. Truth becomes rather an escape from conflicting errors than any positive possession. Idealism becomes a temper of mind rather than a creed—a temper full of faith in an ultimate meaning in the universe, but scarcely ever able to say even in part what that meaning is, unless by pointing to some historical system, social or religious, as a symbol of the reality beyond. . . . Even Hegelianism, even the last word that the last and least dogmatic prophet of

[1] From Mr. Rashdall's review of Wallace's *Lectures and Essays*, in MIND, N.S., No. 31.

Hegelianism may have uttered, is destined to be transcended —to be transcended so soon that it seems hardly worth while to utter it."

To avoid misunderstanding I may say that in my opinion this general view of knowledge is the only view open to us; but, if supposed to be the last word of philosophy, it is profoundly unsatisfactory. It does not, indeed, preclude us from an immanent criticism of conceptions and principles by reference to one another, so as to ascertain which are, relatively to the rest, the most fundamental. Such criticism is necessary, and constitutes the task of the Theory of Knowledge; but if its results are put forward as a philosophy of the universe it is clear that they will not work.[1] Some further test of the relative truths is required. A favourite way of escape is to fall back on some form of philosophical Dogmatism. The essence of Dogmatism is to assert some limited principle, or set of limited principles, as absolute. Ordinary Intuitionism does this; it confuses what I have called "practical certainty" (the feeling of practical ease in believing, or compulsion to believe) with theoretical certainty. As Mr. Balfour remarks, "nothing is more in need of demonstration than the obvious".[2] Another way of escape is that of "Logical Absolutism,"[3] which takes the main principles of the traditional or scholastic Logic to be absolute. This form of Dogmatism reduces its assumptions to the simplest conceivable. *Tecum habita, et noris quam sit tibi curta supellex.* But however scanty the remnant may be, it consists of assumptions which, when used in any absolute reference, become groundless, arbitrary, essentially dogmatic: as when they are used to prove that any *thing* can *be* essentially "indefinable" or *be* essentially "self-contradictory". That the principle of Contradiction, for example, is valid, in some sense of the latter term, is of course essential to thinking at all; but if I were asked, as a preliminary to a discussion, whether I accepted the validity of the principle of Contradiction, I hold I should be justified in refusing the admission until I knew exactly what my questioner meant by its *validity* and by the *grounds* of its validity; and any real answer to these

[1] That the Theory of Knowledge is necessary, and yet incapable by itself of providing a metaphysic of reality, is the first main contention of the writer's *Philosophical Criticism and Construction.*

[2] *Foundations of Belief*, first ed., p. 98.

[3] Evinced in the logical procedure of Mr. Moore in his *Principia Ethica;* and, on a much larger scale, in the philosophy of Herbart, which as the Editor of MIND once pointed out to me, is simply "a metaphysical application of Formal Logic".

questions would dispose of the claim of the principle to be absolute.

The conception of truth as an organic whole seems in fact to dissolve the dogmatic intellectual tests of truth which are and have been employed: this is its chief significance, and (I will add) its chief value. By this means, and by its constructive implication that all truth is a matter of degree, it prepares the way for an advance in our conception of what the *tests* or *evidences* of truth really are. They essentially have reference to concrete experience, for only there is the working power of ideas to be seen. Thought cannot of itself create evidence, whether in philosophy, science, or common life. There can be no evidence without desire, will, and action. This I take to be the fundamental argument of *The Will to Believe* (see, *e.g.*, pp. 105-108). In every case of knowledge the evidence has to be *made* as much as *found*. In physical science the evidence is made by an experiment, which is a practical problem set to Nature to answer, and the experiment would not be made unless the hypothesis appealed to the inquirer as worth trying,—as for his purpose "desirable": that is, in Prof. James's words, unless it were for the investigator a "live" hypothesis. But experiment is not limited to the questions asked of Nature regarding the causal connexion of physical events, where the conditions are capable of precise quantitative estimation. A moral and spiritual principle may or rather must be conceived as a hypothesis to be tested by action and experience. And this is the same in method as the testing of a scientific truth or hypothesis by experiment. Of course in the case of a physical hypothesis we are dealing with something much more abstract than in the case of a moral or spiritual principle, so that we understand the conditions much more completely and can thus make the experiment quantitatively exact. In a biological or physiological experiment this kind of exactness is much less possible: in the testing of a rational or moral or spiritual principle it is inconceivable. But there is one method throughout.[1]

The battle-ground over which the question of this test is fought is its applicability to various theories of man's place in the universe. On pragmatist principles such a theory may be regarded as true if (to adopt a common but vague mode of expression) it "works" so as to "satisfy our needs,"—that

[1] This of course implies that the kinds and degrees of experience are indefinitely numerous, comprising all the infinite variety of realised objects of human thought and action.

is, if it calls into operation those powers of ours which tend to the realisation of the best life and at the same time harmonise with experience.[1] Or, as it has otherwise been expressed,[2] "the belief which works is true; but it must work all round. It must satisfy our needs, but it must satisfy them all,—the needs of reason not less than those of the will and emotions,—the desire for harmony in our intellectual as well as for harmony in our moral world." Prof. Muirhead suggests that perhaps the needs of the will and emotions are not different from the needs of reason; Humanism, on the other hand, appears to deny that reason has any needs distinguishable from those of our emotional and active nature. To this point we shall return.

It is clear that some important assumptions are necessary, without which the Pragmatist method becomes illusory. (1) In order that our action should have any *results* at all, there must surely be certain relatively permanent characteristics of human nature and a relatively permanent structure of reality at the basis of experience. (2) Since the experience which gives us abiding satisfaction is held by Pragmatism to satisfy the universe also, we must presuppose that the universe is revealed to us in our experience, or, in Mr. Balfour's words, that "There is some kind of harmony between our inner selves and the universe of which we form a part".[3] (3) We must be able to *know* what the results of working out our beliefs really are, in our own and other lives: this implies self-knowledge and knowledge of other selves; and above all, there is required a standard for comparing the various purposes which the working power of our belief hinders or promotes. The test is always practical utility; to be useful means to serve the purposes of life; we therefore require to know what are the constituents of life at its best, and what is the nature of their enrichment, which is to be subserved. Manifestly, then, the Pragmatic method, as outlined so far, though it is sound in principle, could not be put forward as a complete philosophy of truth and reality. One cannot help remarking that a genuine curiosity of philosophic controversy is the way in which the critics of the "Will to Believe" doctrine ignored the essential point in it—which is, verification by experience (in the widest sense of this word).

Prof. James, however, carries the question a step farther

[1] See Prof. Pringle-Pattison's criticism of Balfour in *Man's Place in the Cosmos*, second ed., pp. 194-195, 216, 241, etc.

[2] By Prof. Muirhead in *International Journal of Ethics*, January, 1903, pp. 245-246.

[3] *Op. cit.*, p. 247.

when he maintains that "Faith in a fact may help to create the fact" in cases where our own personal action enters largely into the determination of the fact.[1] To believe that life is worth living makes it so. *Hos successus alit; possunt quia posse videntur.*[2] "Faith in a fact may help to create the fact, provided our own activity enters into the determination of the fact." The essential possibility or impossibility of the Humanist position, as worked out since Prof. James published *The Will to Believe*, depends on the wider or narrower extent given to this qualification. How far is it true that our own activity enters into the determination of every fact? In answering this question, we must bear in mind two things: (*a*) All consciousness is purposive activity; "our existence as conscious beings is essentially an activity, and activity is a process which by its very nature is directed towards an end, and can neither exist nor be conceived apart from this end". This conclusion rests on no special psychological theory, as for example regarding the nature of Attention. It is, rather, a comprehensive induction. As Prof. W. Caldwell has said, "Human beings themselves and history and literature all seem to speak of a life of effort and creative activity and spontaneity as of the very nature of man".[3] Hence also all cognitive activity is at the same time volitional activity: "the ultimate basis of all mental activities, for the right conduct of which we seek a clue in Methodology, is a will which sets before itself definite ends; and to this is due the motive force which impels us to investigation, while the most general principles of investigation are derived from the ends pursued by it".[4] For philosophy to ignore this, in the pretence of "distinguishing between logic and psychology," seems really to be a case of irrational subservience to a blind and lazy tradition.[5] Mr. H. W. B. Joseph[6] makes a sharp distinction between an idea considered as a mere presentation, and an idea considered as being true or false, and again between "a psychological compulsion that drives you to think in a certain way, and a logical recognition that you ought to think in that way,

[1] *Will to Believe*, p. 25. *Cf.* also pp. 24; 59, 60; and 97.

[2] "Because they think they can" (Conington).

[3] *International Journal of Ethics*, July, 1898, p. 466, from an article on "Philosophy and the Activity-experience," which, together with a discussion by the same writer and Mr. H. R. Marshall, *International Journal of Ethics*, April, 1899, and an article by Mr. Caldwell in MIND, No. 36, N.S., constitute an instructive survey of the earlier form of Pragmatism.

[4] Sigwart, *Logic*, § 105.

[5] *Cf. Humanism*, pp. xii., xiii.; 8; 51-54; etc.

[6] MIND, N.S., No. 53, pp. 31, 37.

and that others ought to, whether psychologically they are compelled to or not". In each of these cases there is of course a distinction to be made, and the universal recognition of this is due to the work of Mr. Bradley more than to anything else; but in each case the whole problem lies in showing what is the *connexion* between the two things. A mere *distinguo* is idle. No one has done more than Mr. Bradley to enforce the conclusion that the logical idea, the pure "meaning," if we try to work with it *per se*, is a worthless abstraction. Only in experience is its working power shown. (*b*) All experience, so far as it consists of discriminated facts, depends on our personal activity. My experience is what my interests lead me to notice, and that is what comes home to me as real. "For our interests impose the conditions under which alone reality can be revealed. Only such aspects of reality can be revealed as are not merely knowable but are objects of an actual desire, and consequent attempt, to know. All other realities or aspects of reality, which there is no attempt to know, necessarily remain unknown, and for us unreal, because there is no one to look for them." "The direction of our effort, itself determined by our desires and will to know, enters as a necessary and ineradicable factor into whatever revelation of reality we can attain." Thus our personal activity enters into the determination of every fact: and if so, it follows from Prof. James's principle above quoted that every fact is partly brought into being by our belief in it. By the direction of our own purposes we to a certain extent make both truth and reality. This brings us to the position of Humanism.

Whether or not Humanism is to be regarded as a philosophical advance, depends on the answers it gives to two questions which we have already formulated. The *first* of them related to the account vouchsafed by Humanism of the intellect and its place in mental life. What is this account? It is admitted that the word truth stands for something really attainable, and that there is such a thing as an effective desire to know the truth. Humanism is primarily "a new analysis of truth," inspired by such psychological conclusions as those outlined in the preceding paragraph. Its professed aim is "not to assign to the 'will' the functions of the 'intellect,' but rather so to analyse the latter phrase as to bring out the volitional structure and dependence of every intellectual function".[1] θεωρία is derived from πρᾶξις; for

[1] MIND, N.S., No. 53, p. 126.

"whatever forms of the real we may have discovered, some purposive activity, some conception of a good to be attained, was involved as a condition of the discovery; if there had been no activity on our part, or if that activity had been directed to ends other than it was, there could not have been discovery, or *that* discovery".[1] The attempt is made to dispense with the notion of an objective counterpart to which our ideas must correspond as *copies*, and to explain truth and reality as consisting in postulates necessary for the "practical utilities" of life. All forms of good are realised as conscious purposes, hence the terms "practical" and "useful," constantly occurring in humanist writings, mean simply "serving some conscious purpose" or "leading to the development of life". Is the true, then, merely what it pleases any one to believe (the usual rough-and-ready criticism)? No; there are as many forms and degrees of truth or validity as there are forms and degrees of good. Here we see the bearing of the doctrine of Degrees of Truth on the humanist position. Purposes are always higher or lower relatively to one another; and that truth is most true which serves the highest purpose. Truths which serve a purpose less than the highest have only a relative validity.[2] Individual caprice is controlled by the combined pressure of the needs of consistent personal living and of social intercourse. Thus higher degrees of validity are worked out. "As regards the objects valued as true, truth is that manipulation of them which turns out upon trial to be useful, primarily for any human end, but ultimately for that perfect harmony of our whole life which forms our final aspiration."[3]

In order not to be lost in a maze of details, we must concentrate attention on the application of these ideas to the truth of the first principles of knowledge and to the manner of their derivation. "There are certain truths which are necessary to all knowing, which are implied in the existence of every act of knowledge";[4] "fundamental assumptions of our conceptual interpretation of reality".[5] These principles "begin their career as *demands* we make upon our experience, or, in other words, as *postulates*," "designed to render the

[1] *Humanism*, pp. xiii., 30, 34, and 12.

[2] *Personal Idealism*, pp. 53; 69, note 2.

[3] *Humanism*, pp. 55, 58-61. It is really curious to notice the direct antithesis between this contention and that of the older "Idealism," which the late Prof. Ritchie once summed up thus: "A thing *is* that way of thinking about it which fits it into its place in an intelligible system of the universe".

[4] *Personal Idealism*, p. 68.

[5] *Humanism*, p. 57.

world conformable to our wishes"; "their subsequent sifting, which promotes some to be axioms and leads to the abandonment of others, will depend on the experience of their working".[1] Now a postulate must involve something of the nature of an idea, an awareness, an element of knowledge, prior to the "experience of its working": where, then, are ideas, as such, derived from? How is it possible that there is such a thing as an idea at all? This difficulty comes clearly to light when we ask: *What makes these postulates?* The further we probe this question, the more unsatisfactory seems the answer that Humanism has to give. All notions experimented with are suggested by immediate experience: with the felt unsatisfactoriness of the latter the whole cognitive process starts;[2] but if so, it can start at all only because in the beginning the germs of cognition are present. Primordial postulates may have been blindly made and for long imperfectly understood,[3] but, unless knowledge can be manufactured out of feelings and actions which are *ex hypothesi* blind, some kind of germinal awareness must have been present in order that it should later develop. The author sometimes speaks as if emotion and action manufactured everything,[4] and as if postulation were merely a form of the effort *in suo esse perseverare*.[5] He suggests[6] that the mental order might have been constructed otherwise. Does this mean that there is nothing in consciousness to tend towards any special kind of postulate? In that case, primordial postulates are "accidental variations" in the sense well explained in *Humanism*, page 132: "that no special tendency to vary in any direction rather than in any other was to be assumed, and that the causes of variation, which Darwin forbore to investigate, did not favour one sort of variation rather than another". But the postulates require an origin as much as new variations in evolution. When he comes to face the derivation of the axioms, Mr. Schiller seems to start with a consciousness which excludes knowledge,[7] but has other characteristics.[8] How did any knowledge or recognition arise? "The felt self-identity of consciousness, which, however it arises, is a psychical fact, is, I contend, the ultimate psychical basis for raising the great postulate of logical identity,"[9] a *postulate* "more *or less* consciously felt to be such".[10] This "feeling" contains the germ of knowing, or the phrases used become incomprehensible,

[1] *Personal Idealism*, p. 64. [2] *Humanism*, p. 193.
[3] *Personal Idealism*, p. 123. [4] P. 86. [5] P. 91.
[6] P. 93. [7] P. 95. [8] P. 96. [9] P. 97. [10] P. 102.

more especially since identity is defined[1] as the *recognition of the same* in the *recurrence of the like*. Similar remarks apply to the derivation of the ideas of an external world,[2] causation,[3] space,[4] and time.[5] In each case the psychological data indicated as the basis of the postulate must be grasped in some elementary intelligent form as well as "felt" and acted on. My point is, that intelligence is something primordially distinct from feeling and action, though like these it is essentially a process of germination and growth, and is therefore plastic, but has a law of growth tending to certain forms; and that no intelligible derivation of any postulate can be given without presupposing the presence of the intellectual function in however elementary or embryonic a form. On the other hand, once admit this, and the pragmatist derivation wears a very different aspect. On the basis of psychology and evolution, it is known that our intellectual functions have been set in action by purely practical needs, and have developed gradually to a more theoretic function, while remaining entirely immanent in the process of experience; and the ultimate conclusion is one which would be widely accepted, being indeed identical with the central thought of Kant: that the first principles of knowledge are postulates actually required by science, forced upon us by the mere assumption that science is not an illusion.

In a suggestive passage the author compares the process of postulation with the use of a scientific hypothesis, and finds them essentially similar. In the case of the hypothesis, on his own showing, "facts must be interpreted by intelligence," and intelligence suggests the hypothesis. This makes the question all the more pressing: what suggested the primitive postulates? Is there or is there not an attempt to dispense with intelligence in suggesting them? It would seem that the author's confessed object of "connecting cognition with the earlier functions of consciousness by means of the postulate" breaks down unless these earlier functions are themselves germinally cognitive.[6]

A brief digression on one or two questions regarding Space may be permitted. The development of conceptual or geometrical space is shown to be due to a process of "idealisation"; but how any "idealisation" at all is possible the author does not show.[7] One would like to see Mr. Schiller's critique of Locke's attempted derivation of the ideas of "Immensity, Eternity, and Infinity". Further, if the "idealisation"

[1] *Personal Idealism*, p. 98. [2] P. 105. [3] Pp. 108, 110.
[4] P. 112. [5] P. 116. [6] Pp. 107, 125. [7] P. 113.

which led to the conception of Euclidean space was made because this conception is so useful (much more so than that of non-Euclidean space), why is the former declared to be "not real"?[1] "Que l'on spécule sur des théories aussi éloignées de l'application et de l'action, que l'on arrive simplement à dire que notre représentation de l'espace, plus commode, n'est pas plus vraie que toute autre, n'est-ce pas la preuve de la nécessité où nous sommes de distinguer le point de vue de l'action de celui de la connaissance, la vérité de l'efficacité?"[2]

Returning from this digression, we notice in the next place that difficulties precisely similar to those mentioned above arise in Prof. James's more recent statement of the position in MIND, N.S., No. 52. He says, for example, "there is probably not a common-sense tradition, of all those which we now live by, which was not in the first instance a genuine discovery, an inductive generalisation"; they all were "once definite conquests made at historic dates by our ancestors in their attempts to get the chaos of their crude individual experiences into more shareable and manageable shape; they proved of such sovereign use as a *Denkmittel* that they are now a part of the very structure of our mind".[3] Most true, I reply, provided you do not so define your primitive consciousness as to make it contradict the very notion of "discovery". Thus, "the concept of permanently existing things . . . becomes an interpretation so luminous of what happens to us that once employed it never gets forgotten". Where does it come from? What manufactures it? And for what purpose is it "luminous"? If the reader asks, "What answer do *you* give to such questions?" I reply that I believe intelligence to be a living creative function; that the first emergence of the idea of permanently existing things, appearing as a contrast between the feeling, striving life and things which are not a part of the life, is simply the first emergence of intelligence;[4] that the idea "survives" because it is useful both for the purposes of practical living and for the purposes of understanding the structure of the world in which the practical living has to go on; and that it has become permanent because without it we cannot

[1] *Personal Idealism*, p. 115; *cf. Humanism*, p. 91.

[2] From a brief criticism of *Humanism* in *Rev. de Mét. et de Mor.*, Sept., 1904.

[3] MIND, N.S., No. 52, p. 460.

[4] Otherwise there seems no possibility of creating the idea out of a mere feeling of pain, and struggle to be relieved, followed by a feeling of relief (*Personal Idealism*, p. 105).

think, and we want to think because thinking, even when it does not serve ends of conduct, is a necessary part of our life. This statement of course implies "congruence between the mind and the world," which Mr. James mentions and describes as "curious,"[1] in a way which reminds me of Mill's attitude in a once celebrated case where he found that something, which on his own theory was a "final inexplicability," was none the less an actual fact.

Prof. James, like Mr. Schiller, suggests that there might have been different hypotheses or postulates regarding the world, but he commits himself to a statement which, so far as I know, Mr. Schiller has not made, that primitive chaotic pure experience *sets us questions*.[2] Sets "questions" to whom or what? To a mind, or an organism, devoid of the uttermost beginnings of intelligence? He also seems to admit, beside the fundamental need of communicating with one another, foreseeing the course of experiences, and steering our lives by rule, another need—of gaining "a cleaner, clearer, more inclusive mental view".[3] This looks like the recognition of an intellectual desire for truth, and a search for it, conceived as something more essential to us than if it were the mere free exercise of an acquired habit. Mr. Schiller goes so far as to condemn as irrational the desire for knowledge "for its own sake".[4] There is great confusion involved in the current use of the phrase "for its own sake". It ought to be evident that what is really desired is, not the mere possession of "truth" as a passive state, not as Lotze somewhere says the mere representation inside us of what is outside us: what is desired is the active-emotional direction of the mind to the realisation of one end —of *so thinking* that our thought may harmonise intellectually with the fundamental structure of things. One would like to ask how many scientific discoveries—which *after discovery* have proved of immense benefit to human life all round, but were in this sense useless at the time of discovery—would ever have been made, if a constituent part of our nature were not the desire to know, the desire to know for the sake of nothing beyond the essential intellectual emotional activities implied in the realising of the knowledge? It is easy to talk of scientific theories as "compendious shorthand," etc., and so as "useful"; but for what are they useful? They are useful in the first place because man is rational and therefore desires them. We may very

[1] MIND, N.S., No. 52, p. 459. [2] *Ibid.*, p. 461.
[3] *Ibid.*, p. 461. [4] *Personal Idealism*, p. 85.

well regard science as merely seeking summary views of the universe: but once more we must admit that such views may be, and rightly may be, sought for the sake of nothing beyond their active realisation by the seeker. Prof. James is more cautious than Mr. Schiller. He admits and does not condemn the growth of an intrinsic interest in the bare describing function, a "theoretic curiosity," a "theoretic need"[1] but he does not show how this has come to be in a life where all interests were at first practical, when the latter term means limited to the needs of feeling and action.

My own solution of the difficulty has already been implied. It is, to include the needs of the intellect among what Mr. Bradley calls "the main tendencies of our nature," and to insist that intelligence, like everything else, is a process of growth, and is in reality wholly concrete, *i.e.* entirely immanent in the process of concrete experience in which its principles and ideals are tested. If through the whole course of natural processes there has been a teleological factor which has come to be a deliberate purpose in human life, it is through reason alone that we can hold that purpose in view and compare it with all the minor purposes to which it gives value and which are judged in its light; and the demands of reason itself form part of that supreme purpose. Either you deny that there is any highest purpose co-ordinating all purposes (in which case Humanism sinks to the level of the crudest naturalism) or you do not deny it. In the latter case the purpose must be conceived as an Ideal. That human life is lived in the presence of such an Ideal is a comprehensive induction from experience. An Ideal means what is sought for but not yet fully realised in life: our aspirations point to that which is really higher than any practical achievement or any definitely discriminated fact. Hence no Ideal can be shaped without *going in advance of conduct*. But the apprehension of an Ideal as an effective influence in life implies even more than an advance, in thought and desire, beyond all actual facts and deeds: it implies that the Ideal comes home to us, prior to any experience of its value by way of action, with an *inherent* worth, a goodness, truth, and reality of its own. Otherwise, it would have little power to affect action, for the man would be following what was for him a creation of his own mind. An apprehension of super-individual or super-personal reality in the Ideal is a necessary precondition of the maintenance of the human struggle for better life. It is possible to hold this, if with Mr.

[1] MIND, N.S., No. 52, p. 470.

Bradley we recognise that experience is not limited to definitely discriminated deeds and facts, that *beyond both thought and conduct* lies a region which is immediate to consciousness and which gives to purpose its significance. Human experience is not merely finite.[1] It is not necessary to show at length that the admission of all which we have just said concerning the apprehension of the Ideal, does not interfere with the doctrine already laid down, that the truth and reality of the Ideal *in the details of life* must be established for the experient by the criterion of usefulness, in the fullest and deepest meaning of this word.

The *second* of the two questions facing the humanist related to the theory of reality as "plastic," as capable of being moulded and made by our action. My preliminary statement implied the truth of this as regards *experience;* but to make the same statement of *reality*, *i.e.*, to regard it as an ultimate metaphysical truth, is a very different thing. There are, however, some admissions first to be made.

(*a*) We shall all admit the general disappearance[2] of the old *static* view of reality; I mean the view that the real is distinguished from the phenomenal by being a realm of eternal necessities, of unchanging essences, of absolute meanings. We also recognise without regret that the word "ontology" has gone out of use. In place of the static view, we have now *dynamic* views of the real, and the predominance of such conceptions as those of purpose and function. Indeed, in a sense it is true that processes of active evolution are the essential nature of all reality. For this reason, in accordance with what has been already said, it is now inevitable that the consequences of theories should be regarded as part of their very nature and data, since their object is to explain *the processes*.

(*b*) In the case of consciousness this change is especially marked. We have already dwelt on the importance of the conceptions of action and purpose. What we have now before us is a transformation of the whole conception of mental life, which is regarded as a process not only of activity but of productivity,—if we may use the term: an

[1] *Cf.* the writer's *Philosophical Criticism*, chap. vii., § 4; and *Leaders of Religious Thought, passim*. If ever a hardened prejudice has been pulverised in philosophy, Prof. James in his *Varieties of Religious Experience* has done so to this one, of the essential finiteness of human experience. It is remarkable that Mr. Schiller betrays so little appreciation of the importance of this.

[2] Except in the case of the naturalism of popular science, as expounded for instance by Haeckel.

unceasing process of producing from within new modes of thinking, feeling, and willing. The Hegelian conception of self-realisation has largely contributed to this advance in thought; but in recent years there is, as far as I know, no one but Wundt who has made fundamental in his philosophy the principle that consciousness is ever striving after a fuller realisation of its life. The essential nature of mind consists in its creative functions, which are inexhaustible. On the other hand, the operation of this law can be traced in reason as well as in feeling and will; and it cannot be used to explain the development of life without taking into account *the conditions* under which the unfolding of conscious potentialities takes place.

(*c*) This view involves the recognition that conscious life is a real factor in the course of events. Our achievements in the way of moulding the world are not predetermined for us but determined by us. We therefore at once admit Mr. Schiller's first contention: we must discard the notion that in the constitution of the world we count for nothing,—that it matters not what we do, because reality is what it is, whatever we may do. "It is true on the contrary that our action is essential and indispensable, and that to some extent the world (our world) is of our own making."[1] But unless we are informed exactly *to what extent* the world is of our own making, the statement quoted becomes only a restatement of the truth that our experience, so far as it consists of distinct facts, is only of objects of an interest, of an actual desire and consequent effort to know. To deny the *absolute determination* of the universe (including *a fortiori* the absolute determination of all its parts), to repudiate what Prof. James calls the "block universe," and to admit the presence of human activity in the construction of experience, is not the same thing as to say in general terms that reality can be constructed in various ways by our efforts.[2] How far beyond this is reality plastic to our efforts? Messrs. James and Schiller give various answers, which taken together amount to no answer.

Prof. James says that truth is "not a literal transcript".[3] The natural reply is, that because it *works* it must be partly a transcript; being a transcript may be part of the *meaning* of truth without being in any degree a *test*. Also, to hold that part of the meaning of truth is to be a representation of something genuinely objective, is a different view from

[1] *Humanism*, p. 12. [2] *Ibid.*, p. 49.
[3] MIND, N.S., No. 52, p. 459.

that against which the humanist protests, that there is a "fact *per se*" *unaffected by* our thought or interests, which our ideas must needs servilely copy. It does not appear that Humanism can get itself stated without implicitly admitting a definite and coherent objectivity. For example, Prof. James says that experience in its "pristine purity" was "chaotic," but is now "enveloped in predicates historically worked out". What is this conception of a wholly indefinite pure experience? Is it not the hypostatised abstraction of the entirely indeterminate—that which may be made anything, but contains in itself no nature, no structure, no law of being or of growth, by which it tends to be one thing rather than another? In the immediate context of the words last quoted, the author observes: "Whether the *Other*, the universal *That*, has in itself any definite inner structure, or whether, if it have any, the structure resembles any of our predicated *whats*—this is a question which Humanism leaves untouched. For us, at any rate, it insists, reality is an accumulation of our own intellectual inventions, and the struggle for truth in our progressive dealings with it is always a struggle to work in new nouns and adjectives while altering as little as possible the old."[1] It is clear that if we adopt the conception of pure experience as the *merely determinable*, this process of "working in" could never begin; for the merely determinable *ex vi termini* could never respond to our action in any definite way. The metaphor borrowed from the notion of plastic material in the physical world is of no avail to the pragmatist, for only because such material actually has a "definite inner structure" can we work it up into anything whatever. We could not even say, conditionally, "if it (experience) suffers the addition" of a predicate,[2] unless it has within it something which accepts or rejects the predicate. We are compelled to assume that experience has a structure prior to our action on it, and to harmonise with that structure, to symbolise or *in some degree* to represent it, is part of the meaning of truth. Finally, Prof. James seems to grant all that I ask for: "There is something in every experience that escapes our arbitrary control. If it be a sensible experience it coerces our attention; if a sequence, we cannot invert it; if we compare two terms we can come only to one result. There is a push, an urgency, within our very experience, against which we are on the whole powerless."[3] Admitting this, you have admitted that reality is something more than "the accumulation of our own intel-

[1] MIND, N.S., No. 52, p. 462. [2] *Ibid.*, p. 463. [3] *Ibid.*, p. 463.

lectual inventions," and that it is not merely something determinable. You have admitted the *objective* in the sense in which the despised "realist" contends for it. Having gone so far with him, he can compel you to go much farther; though, as I fully admit, he cannot compel you, and so far as he is a consistent realist he will not try to compel you, to accept the real as something in and for itself and apart from our interests and our agency.

The cardinal ambiguity spoken of above is equally prominent in Mr. Schiller's writings. In the passage where he deals with the question most fully,[1] he starts with the statement, which we accept, that our experience of definite events consists of the accumulated results of a long process of trial and experiment; and he ends with the statement that all reality, as such, consists of the accumulated results of such processes. It is clear that this conclusion can be drawn from the given premiss only by identifying all reality with our experience of discriminated facts.[2] This of course is a familiar doctrine; but the ambiguous position of the intellect in the humanist theory leaves the precise meaning of this phenomenalism more uncertain than ever. And the uncertainty does not appear to be removed by a revival of the Aristotelian conception of ὕλη in order to meet the obvious reply that if we subjectively create reality, then (*a*) we do not create it out of nothing, and (*b*) there are definite limits to our creations. The precise significance of ὕλη for the Aristotelian philosophy is not now under discussion; but for Mr. Schiller it seems to mean (as with Prof. James) that which is merely determinable,—that which is, but is only what it is made. I am entirely unable to see how such a purely formless ὕλη can supply the factor which is admitted to be present in our experience,—a factor of "resistance" and "persistence" which imposes conditions on the unfolding of our mental life. It will be said that the ὕλη has been moulded through the ages of evolution to the form of a coherent objective world. But we must again ask how the absolutely formless could ever begin to assume a form: and if it was not absolutely formless, what was it? Can the notion of the formless, the πρώτη ὕλη, be treated as a "vanishing point," or "limit," unrealisable within experience? Not on the humanist theory, it would seem; for the humanist derivation of axioms necessarily implies that it *has*

[1] *Personal Idealism*, pp. 55-64.

[2] *Cf. Humanism*, p. 10, where "reality" and "the experience or revelation of reality" are treated as equivalent terms.

been realised within experience, and *was* prior to the origin of validity.

Elsewhere[1] Mr. Schiller suggests as an analogy the case of human character growing definite by the action on it of other persons and events: "All that the result entitles us to assume is a capacity for social feeling, variously responsive to various modes of stimulation. . . . To the objection that even in our social dealings not all the results are indeterminate, the reply is that it is easy to regard them as having been determined by earlier experiments." Is it easy? To imagine a being utterly *characterless* having a character somehow produced in it by the action on it of other beings! To such a being all stimuli would not only *mean* nothing but *be* nothing; and in order that they should even *be* anything for it, it must have a character. Indeed, the notion that the *prius* of all experience was an "absolute chaos"[2] is to me, in the strictest sense, *unthinkable*. Accordingly it is with a certain sense of a "collapse" having taken place somewhere, that one sees this incredible metaphysical dogma (of the real being nothing but what we make it) suddenly transformed into a "methodological postulate". And then, we may admit that its use, within proper limits, is abundantly justified. As to the limits of such postulates—their truth for one purpose and their falsity for another, their value at one stage of an inquiry and their obstructiveness when that stage is passed—Mr. Schiller has spoken effectively and truly.[3] The postulate is as follows: "The world is plastic and may be moulded by our wishes if only we are determined to give effect to them. . . . The extent of the world's plasticity is not known *a priori*, but must be found out by trying; now in trying we can never start with the recognition of rigid limits and insuperable obstacles, for if we believed them such, it would be no use trying."[4] This has always been the postulate of the genuinely scientific and the genuinely inventive spirit; and nothing that I have said interferes with it in the least. It is a practical working caution against dogmatism, bigotry, and prejudice, of every kind.

Humanism has not, so far, delivered us from a significant and fatal ambiguity in which Hegelian Idealism had left us. This idealism had much to say of "The Absolute," of "God": but in Hegel's own writings, and in those of his recent followers, the ultimate implications of the position as regards the being and nature of the Absolute are left in the

[1] *Humanism*, p. 12.
[2] *Ibid.*, p. 12.
[3] *Ibid.*, pp. 147-149, 270-280.
[4] *Personal Idealism*, p. 61.

vague. The Absolute becomes a "point of view". The result has been most forcibly shown by Prof. Pringle-Pattison. Writing in 1894, he pointed out how, in preaching the truth that the nature of the Absolute is revealed in the world of its appearances and not craftily concealed behind them, Hegel tends to pass to a sheer identification of the two—"literally to identify the history of humanity with the development of the Absolute"; and how Mr. Bradley, his *via negativa* notwithstanding, shows the instinct of the true thinker in recalling us from a "too narrow humanism" to an insight into the vastness of the sustaining life that operates unspent throughout the universe:[1] "True as it is in the proper reference to say that the Absolute realises itself in human self-consciousness, it becomes fundamentally absurd if the saying is taken to mean that the Absolute exists, so to speak, by the grace of man, and lives only in the breath of his nostrils. Is it not both absurd and blasphemous to suppose that the power which cradles and encompasses all our lives is not itself a living fact, and that it is reserved for man to bring the Absolute, as it were, to the birth?"[2] Our conclusion is that any identification of reality, as such, with human experience, is indefensible; and, on the other hand, that a refusal to seek the character of reality elsewhere than in its appearances (that is, in human experience) is entirely justified. We have no predicates save those drawn from human experience. We do not therefore confine the spirit of man within a narrow and self-sufficient positivism, and seek to destroy all sense of the infinite greatness and infinite mystery of the world. We find experience always plastic to our efforts, always capable of assuming new forms and degrees in response to the ἐνέργεια of the human spirit; but the more we are able thus to mould it, the more deeply does it reveal to us its abiding foundation, which we characterise by reference to the Ideals that our nature compels us to acknowledge. "We must believe that reality satisfies our whole being; our main wants—for Truth and Life, and for Beauty and Goodness—must all find satisfaction."[3]

[1] *Man's Place in the Cosmos*, pp. 141 ff. [2] *Ibid.*, p. 145.
[3] F. H. Bradley, *Appearance and Reality*, second edition, p. 159.

V.—CRITICAL NOTICES.

Untersuchungen zur Gegenstandstheorie und Psychologie. Mit Unterstützung des k. k. Ministeriums für Kultus und Unterricht in Wien herausgegeben von A. Meinong. Leipzig: Verlag von Johann Ambrosius Barth. 1904. Pp. xi, 634.

This book consists of eleven essays, one by Meinong, the other ten by his pupils. Meinong's and the two which immediately follow it deal with what Meinong calls *Gegenstandstheorie*, and are largely concerned with matters of fundamental philosophical importance. The eighth, "Ueber Vorstellungsproduktion," deals with the relation of the apprehension of a complex to the apprehensions of its constituents, and is thus closely related to Meinong's non-psychological work. One deals with ethics; one with the principle of economy of thought; and the other five with special points of psychology. There is thus no very close unity, except what results from similarity of outlook and method. Especially the first three essays and the eighth belong together. The philosophy set forth in them is a development of that contained in Meinong's *Annahmen*, and its value appears to me to be very great. Its originality consists mainly in the banishment of the psychologism which has been universal in English philosophy from the beginning and in German philosophy since Kant, and in the recognition that philosophy cannot concern itself exclusively with things that exist.

Presentations, judgments and assumptions, Meinong points out, always have *objects;* and these objects are independent of the states of mind in which they are apprehended. This independence has been obscured hitherto by the "prejudice in favour of the existent" (*des Wirklichen*), which has led people to suppose that, when a thought has a non-existent object, there is really no object distinct from the thought. But this is an error: existents are only an infinitesimal part of the objects of knowledge. This is illustrated by mathematics, which never deals with anything to which existence is essential, and deals in the main with objects which *cannot* exist, such as numbers. Now we do not need first to study the knowledge of objects before we study the objects themselves; hence the study of objects is essentially independent of both psychology and theory of knowledge. It may be objected that the study of objects must be coextensive with *all* knowledge;

but we may consider separately the more general properties and kinds of objects, and this is an essential part of philosophy. It is this that Meinong calls *Gegenstandstheorie.*

This subject is not identical with metaphysics, but is wider in its scope; for metaphysics deals only with the real, whereas the theory of objects has no such limitations. The theory of objects deals with whatever can be known *à priori* about objects, but knowledge of reality can only be obtained by experience. The theory of objects is not psychology, since objects are independent of our apprehension of them. It is also not theory of knowledge; for knowledge has two sides, the cognition, which belongs to psychology, and the object, which is independent. The theory of objects, Meinong contends, is also not to be identified with pure logic, since logic, in his opinion, is essentially practical in its aim, being concerned with right reasoning. (On this point, opinions will differ; but the question is in any case only one of nomenclature.) The conclusion is, that the theory of objects is an independent subject, and the most general of all philosophical subjects. Mathematics is essentially part of it, and thus at last finds a proper place; for the traditional division of sciences into natural and mental left no room for mathematics, because it took account only of the existent. Grammar may be a guide in the general theory of objects, as mathematics in more special parts of the theory.

The first great division of objects is into three classes, those which exist, those which subsist (*bestehen*), and those which neither exist nor subsist.[1] It is obvious that abstracts such as diversity or numbers do not exist; propositions, again, are non-existent; thus certainly there are objects which do not exist, and which yet in some sense subsist. But even when we include subsistence, we do not, it would seem, find a place for *all* objects; some, such as false propositions, the round square, etc., are objects and yet do not subsist.

There are two sorts of judgments, which may be called *thetic* and *synthetic;* the former assert the being of something, the latter assert its being so-and-so (*Sein* and *Sosein*). The latter sort may subsist when their subjects do not subsist; the round square is certainly both round and square, although the round square does not subsist. We may say, if we like, "There are objects of which it is true to say that there are no such objects" (p. 9). Ameseder, the author of the second article ("Beiträge zur Grundlegung der Gegenstandstheorie"), discusses the three kinds of objects more in detail, and reduces existence to the being of a certain kind of objects. An object (*Gegenstand*) is either an *Objekt*[2] or an Objective—the latter being a proposition or something derivative from a

[1] Meinong appears to use *Sein* and *bestehen* as synonyms, and I shall use *being* and *subsistence* as synonyms.

[2] As this word is used in a different sense from *Gegenstand* I shall leave it untranslated, using "object" to translate *Gegenstand.*

proposition.[1] Objects may be divided into three classes, those whose being is respectively necessary, possible, and impossible. The being of what is possible, if the possible object is an *Objekt*, is defined as *existence;* but a possible Objective (*e.g.* the existence of a possible *Objekt*) has being, but not existence. Whatever is necessary is an Objective; but some Objectives are possible, and some are impossible (pp. 82-84). Still more definiteness is given to the subject of non-subsistent objects by Mally in the third article ("Zur Gegenstandstheorie des Messens"). A being-so (*Sosein*) whose subsistence excludes that of its *Objekt* (*i.e.* what would usually be called its subject) he defines as *contradictory.* An *Objekt* which has a non-contradictory being-so he defines as *possible.* "The roundness of what is square" is an impossible being-so; but the roundness and squareness of the round square, so far from being impossible, are necessary, though contradictory. It is impossible a square should be round, but not that the round square should be round, which is necessary (p. 128). Again he says: "Even if A . . . in fact is *not*, it is yet tautologically certain that the being of . . . 'the subsistent A' subsists. By a judgment 'the subsistent A subsists,' no more is judged about the (factual) being or not-being of A . . . than by the hypothetical judgment: 'If A is, it is' . . . The 'being and not-being' of the 'A which is and is not' subsists" (p. 133). Ameseder, in the preceding article, says, in the same spirit, that, if B is impossible, 'A differs from B' and 'A does not differ from B' may both be true (p. 88).

It is not customary for philosophers to face the round square with so much courage; and indeed few logicians can withstand its onset. But if we are to be clear about the supposed non-subsistent objects, it is quite essential that we should have a satisfactory theory about the round square. For my part, I am not convinced that there are any non-subsistent objects. But let us see what the arguments against them are.

Meinong's theory may be modified, (1) by denying his non-subsistent objects, (2) by denying that they do not subsist.[2] I should propose to apply the former process to the round square, the latter to false propositions. There is, Meinong admits (p. 12), one strong argument in favour of the subsistence of the objects which he regards as non-subsistent, and that is, that such objects can be subjects of true and therefore subsistent propositions. But this argument, he says, depends upon regarding a proposition as a complex, and its subject as a constituent of it; and such a view, he thinks, can only be taken figuratively. I should have thought the subject of a proposition was a constituent of a complex in the fundamental sense from which all others are derivative, and that

[1] On the meaning of the word Objective see MIND, N.S., No. 51, pp. 349 ff.

[2] We might also invent a third kind of being, more tenuous even than subsistence. Meinong considers and rejects this plan (p. 11). His reasons seem to me not decisive; but I shall not further consider this plan.

therefore the argument would be sound. But the chief objection to Meinong's view seems to me to lie in the fact that it involves denying the law of contradiction when impossible objects are constituents. If 'A differs from B' and 'A does not differ from B' are to be both true, we cannot tell, for example, whether a class composed of A and B has one member or two. Thus in all counting, if our results are to be definite, we must first exclude impossible objects. We cannot, if B is impossible, say 'A and B are two objects'; nor can we strictly say 'B is one object'. And the difficulty is that impossible objects often subsist, and even exist. For if the round square is round and square, the existent round square is existent and round and square. Thus something round and square exists, although everything round and square is impossible. This ontological argument cannot be avoided by Kant's device of saying that existence is not a predicate, for Ameseder admits (p. 79) that "existing" applies when and only when "being actual (*wirklich*)" applies, and that the latter is a *Sosein*. Thus we cannot escape the consequence that "the existent God" both exists and is God; and it is hard to see how it can be maintained, as Mally implies (p. 133), that this has no bearing on the question whether God exists. Thus I should prefer to say that there is no such object as "the round square". The difficulties of excluding such objects can, I think, be avoided by the theory of denoting; in any case, it is plain that the admission of such objects is open to grave objections. But much credit is due to the authors of this book for the thoroughness with which their view is developed.

For those who agree with the general standpoint of the work, this question of impossible objects is the most important one of all that arise in considering it, and our view in regard to it will affect very many of our other views. There are certainly difficulties in either hypothesis; but I think the hypothesis adopted by Meinong, Ameseder and Mally involves the greater difficulties.

In place of the theory of denoting,[1] Mally, in the third essay, develops a theory of explicit and implicit *Objekte*, which serves a similar purpose. Mally's essay, before it reaches the subject of measurement, treats afresh all the fundamentals of the theory of objects; it does this in a series of definitions, often (I think) embodying important ideas, but so obscurely expressed that it is very hard to understand what they mean. I shall not attempt a summary, as no summary could be more condensed than the original, in which single pages contain more matter than one usually finds in twenty. But some attempt must be made to explain the nature of explicit and implicit objects, though I am not sure of having fully grasped the author's meaning.

An Objective of the form "A is" or "that A is" or "A is *b*" or

[1] *I.e.* Frege's distinction of *Sein* and *Bedeutung*; *cf.* his article on this subject in *Zeitschrift für Philosophie und philosophische Kritik*, vol. 100. See also my article in present number of MIND.

"that A is *b*" is called an *explicit Objective*, and its subject[1] is an *explicit subject*, having the form "A which is" or "A which is *b*". A determination which "coincides essentially"[2] with an explicit Objective, without being one, is called an *implicit* determination; and a similar definition applies to an implicit subject. An explicit determination or subject with the determination of being implicit is called a *fictitious* determination or subject (pp. 137, 138). As an illustration, "Number which is greater than 5" is an *explicit* object; this is not 6, or 7, or 8, or etc., nor yet the aggregate of all of these; but each of these "coincides completely" (in Mally's sense) with this explicit object. Thus 6 *e.g.* is an *implicit* object having the kind of connexion in question with our explicit object. Now consider "a *certain* number which is greater than 5". This still has the same ambiguity as the *explicit* object, but it *says* it is a particular one of all the possible numbers 6, 7, 8. . . . Thus it is fictitious: it is a particular, but a *general* particular, if one may coin such a phrase. This distinction is an elusive one; at the same time, it is certainly genuine and important. For example, among the indemonstrable propositions which are the premisses of mathematics there are two which may be roughly stated thus: (1) "What hold of all, holds of any"; (2) "What holds of all, holds of each". The first, when we are given that all men are mortal, allows us to infer the proposition "any man is mortal"; the second allows us to infer that Socrates is mortal, and also that Plato is mortal, and so on. In the second, we infer the mortality of a certain definite man; but when we state the principle generally, the definiteness is fictitious: we say it is there, but in fact it is absent. This seems to be a case of a kind similar to that of Mally's fictitious objects. As to his explicit and implicit objects, their relation seems to be that of denoting concept to object denoted. The manner of statement, as opposed to that by means of *denoting*, seems to be determined by the admission of non-subsistent objects, which renders it unnecessary to make a sharp distinction of meaning and denotation such as we require for the denial of denotation in the case of impossible objects.

Mally passes next to the definition of *complexion* and *complex*, which is as follows: "A quality with several objects of determination (*Bestimmungsgegenstände*) and *one* implicit subject (*Eigenschaftsgegenstand*) is to be called an implicit complexion. The implicit subject of a complexion is to be called an implicit complex. The objects of determination of an implicit complexion are called its *inferiora*. The objects of determination of an implicit complex are called its *constituents*, or also *inferiora* of the complex" (p. 147).[3]

I hope other readers do not find these definitions perfectly easy

[1] I translate by "subject" the word *Eigenschaftsgegenstand*, which is used very nearly in the usual sense of "subject," though not quite.

[2] *I.e.*, approximately, has the same predicates, or applies to the same subjects, as the case may be.

[3] The above definitions are restated in shorter form on p. 153.

to follow. I believe the meaning is really quite definite, but the technical terms introduced are so numerous, and the fundamental ones are so hard to apprehend, that the definitions become very puzzling. In the present case, an illustration is given which greatly eases matters. *Triplicity*, Mally says, is an implicit determination with several objects of determination, namely one, one, one. Its implicit subject is not many, but one, namely the implicit complex called *three*. This instance makes the meaning fairly clear; but I find it hard to believe that a definition of complexity can avoid circularity. In the above case, plurality is introduced, which is a particular "complexion," and is definable when complexity is taken as indefinable.

Mally's theory of number is not very satisfactory. With every complex, he says, "coincides" an aggregate-complex (*Mengenkomplex*) of its constituents. An aggregate-complex wholly determined by its complexion—*i.e.* composed of wholly indeterminate objects—is a *pure* aggregate-complex. Every aggregate-complex has a *degree*, which depends only on the complexion of the complex. An aggregate-complex of determinate degree is called a number-complex or number (pp. 163-165).

This theory, to begin with, will only apply to *finite* numbers; but this is not the only objection to it. There seems to me to be a confusion between a number and an aggregate to which it applies. Mally confesses (p. 166) that *couple*, *trio*, etc., seem more appropriate words than 2, 3, etc.; and in fact what he defines as the number 2 seems to be really an indeterminate couple. I should escape this indeterminateness by defining 2 as the class of couples; for one must, I think, as Mally does, reach the number 2 through couples. A similar remark applies to the above notion of a "pure" aggregate. This is, it would seem, merely an indeterminate aggregate, that is to say, any aggregate. There cannot be an aggregate composed of indeterminate objects, except in a sense which makes the aggregate simply an indeterminate aggregate; but if this is so, there is not a variety of aggregates, called "pure," and having the property that their constituents are indeterminate. Here and elsewhere, one feels the need of Frege's theory of the variable and of functions; but language is so ill-adapted to the fundamental notions of this subject that whoever is afraid of symbols can hardly hope to acquire exact ideas where it is necessary to distinguish (1) the variable in itself as opposed to its values, (2) any value of the variable, (3) all values, (4) some value. These ideas seem to occur in Mally's exposition, but their employment in complicated cases is very difficult for him.

Mally's theory of quantity closely follows Meinong's; it uses the same criterion of a series approaching zero; and it contains similar views as to difference and similarity considered as quantities. He holds, for reasons which seem not very convincing, that every quantity can be diminished, and that zero is therefore self-contradictory and non-subsistent. He has an interesting definition of

a continuum (p. 169), which is reached as follows. A complex whose constituents are complexes of its own complexion is a *homoiomeric* complex; such is a couple of couples. If the constituents of the constituents, and the constituents of these again, and so on *ad infinitum*, are all of the same complexion as the original complex, then the original complex is said to be *throughout homoiomeric*. An implicit complex completely coincident with a throughout homoiomeric complex is a *continuum*. Though this definition is interesting, it is to be observed that it does not apply to mathematical space and time, and that it may well be doubted whether there can be any object to which it does apply. The latter question depends, however, upon whether we hold that every complex must be analysable into simple parts—a difficult question, which need not here be raised.

Mally's theory of the extensions of number—negative, fractional, irrational and imaginary numbers—is not of a sort which will serve in mathematics. Since $-b$, in $a-b$, means the suppression, in an aggregate whose number is a, of a part whose number is b, it seems that $-b$ means the non-being of b. He says (p. 207): "An (impossible) number, whose being is equal to the not-being of another number, is called *negative*". (His theory of the other extensions of number is of the same kind.) But as a matter of fact, in $a-b$, it is not the number b itself that is suppressed, but an aggregate having b terms; here the earlier confusion of numbers with aggregates causes a fresh confusion as regards subtraction. Further, if a right theory of negative numbers is to be framed, we must distinguish the subtraction of b from the result of such subtraction performed on a number a. If we define $-b$ as $0-b$, we certainly get an impossible object, if 0 and b are the sort of numbers applicable to the counting of aggregates. In fact, $+b$ and $-b$ must both be defined as relations, and $+b$ must be distinguished from b just as much as $-b$ must. $+b$ and $-b$ are each other's converses; if two numbers (of the signless sort) a, c, are such that $a+b=c$, then a has to c the relation $+b$, and c has to a the relation $-b$;[1] in other words, what mathematicians would call the operation $+b$ turns a into c, and the operation $-b$ turns c into a. If negative numbers were in fact non-entities they would be useless, for a reason which applies generally against the introduction of non-entities into special reasoning, namely this: Of every impossible object, two contradictory propositions hold. But if two contradictory propositions hold of an object, then *all* propositions concerning that object are true; for if p is any proposition, then every proposition is either implied by p or implied by not-p.[2] Hence if negative numbers are non-entities there is no more point in saying one thing about them than in saying another: a result

[1] Or *vice versa*, according as we may choose to define.
[2] See my *Principles of Mathematics*, p. 18.

which might be expected to follow from denying the law of contradiction.[1]

It is natural to consider, in connexion with the three fundamental essays on the theory of objects, the eighth essay, by Ameseder, "Über Vorstellungsproduktion". He begins by setting forth briefly (pp. 481-483) the theory of sensation which is also explained elsewhere in the book.[2] According to this theory, sensations have objects and causes, but their objects are different from their causes. Thus the sensation of blue has *blue* for its object; but *blue*, though it subsists, does not exist. The *cause* of the sensation of blue is a thing-in-itself, and does exist. But *blue*, though it does not exist, is not dependent on sensation for its subsistence, and does not exist in the sensation of blue. Its subsistence does not, in fact, presuppose the subsistence of anything else. But this is not true of all objects. Founded (*fundierte*) objects[3] and the presentations which apprehend them have an inner dependence upon their *inferiora;* there can be no difference without objects which are different, and no presentation of a difference without presentations of objects which are different. The problem with which Ameseder is concerned is the problem as to the relation of the presentation of a founded object to the presentations of its *inferiora.* The presentation of a founded object is not itself founded, for nothing founded can exist. Nevertheless the presentation of a *superius* is built somehow on the presentations of the *inferiora.* This process is called *production;* it is involved in all perception which goes beyond sensation, for example in the perception of a melody. The conclusion reached is that the presentation of the founded object consists of the presentations of its *inferiora* standing in a *real* relation to each other (p. 496). This depends upon Meinong's distinction of real and ideal relations; the former are not necessary, and may exist, while the latter are necessary, and cannot exist. A real relation is such as that between the elements in a chemical compound; and the connexion of the produced presentation to the elementary presentations is thus conceived as being more or less like that of a chemical compound to its elements. This theory may or may not be satisfactory; in any case, the problem is very clearly stated, and its importance is quite undeniable.

The theory of production of presentations is used to account for the illusion in Müller-Lyer's figure, which is dealt with by Vittorio Benussi in a long and very interesting article (No. V.), "Zur Psychologie des Gestalterfassens". He distinguishes illusions of sensation, of judgment, and of production, and shows by a series of experiments that the illusion in question must be one of production.

[1] This result might no doubt be avoided by modifying the theory of implication; but it seems probable that any modification adequate for this purpose would be inadmissible on other grounds.

[2] *E.g.*, by himself, pp. 91-95.

[3] On the meaning of this term, *cf.* MIND, N.S., No. 50, pp. 210-211.

It appears that whatever, either in the figure or in the state of mind of the observer, increases the consciousness of the figure as a whole, increases the illusion as to the length of the central line of the figure. The illusion is not one of judgment, for it is unaffected by knowledge of the facts; it is not of sensation, for such illusions have the following marks, which it has not: (1) they depend on the stimulus, and cannot be modified by the subject; (2) they are uniquely determined by the stimulus; (3) their magnitude has in principle no limits; (4) they are not altered by practice. As regards (1) and (2), Benussi found that the illusion is diminished by telling the observer to concentrate attention on the central line, and increased by telling him to observe the whole figure. He concludes (p. 395) that contents in a real relation influence each other in the sense of their own natures; and that the presentation of shapes has this effect in a high degree because it involves a real relation of the presentations of the parts of the shapes.

The sixth essay, by Vittorio Benussi and Wilhelmine Liel, applies the same principles to the illusion of the shifted chess-board, and reaches a similar conclusion. The fourth essay, by Wilhelm Frankl, discusses the principles of Avenarius concerning economy of thought, and decides that, though certain principles of economy are valid, there are none so general or so fundamental as Avenarius contended. The seventh, by Vittorio Benussi, gives a new proof of the specific brightness of colours. The ninth, by Ameseder, "Über absolute Auffälligkeit der Farben," contends that this quality can be determined by experiments, some of which he has carried out and gives the results of. The tenth, by Wilhelmine Liel, "Gegen eine voluntaristische Begründung der Werttheorie," is in the main a polemic against Schwarz, contending that value is derived from feeling, not from conation. The eleventh and last, by Robert Saxinger, "Über die Natur der Phantasiegefühle und Phantasiebegehrungen," contends that the feelings and desires of imagination are facts *sui generis*, differing from feelings and desires proper as assumptions differ from judgments. The argument is unconvincing to me, because I often dissent where he appeals to introspection. For example he says that all feelings proper weaken with the lapse of time, in the absence of fresh stimulus, whereas those of imagination are constant—a difference which to me is not apparent in experience.

The book as a whole does the highest credit to the Graz school of psychology and philosophy; and its main articles contain theories which demand and deserve careful study. The second and third articles, by Ameseder and Mally, contain so many important definitions in quick succession that it has been impossible to give an adequate idea of their contents in the space of a review. The first article gives what we may suspect is the final term of Meinong's development away from psychologism; his present position appears to me clear and consistent and fruitful of valuable results for philosophy.

B. Russell.

Die Probleme der Geschichtsphilosophie : eine erkenntnistheoretische Studie. Von GEORG SIMMEL. Zweite, völlig veränderte Auflage. Leipzig : Duncker & Humblot, 1905. Pp. viii, 169.

Die Grundlagen der Geschichtswissenschaft : eine erkenntnistheoretisch-psychologische Untersuchung. Von EDUARD SPRANGER. Berlin : Reuther & Reichard, 1905. Pp. xi, 146.

Geschichtliche Wertmassstäbe in der Geschichtsphilosophie bei Historikern und im Volksbewusstsein. Von ARVID GROTENFELT. Leipzig : Teubner, 1905. Pp. 211.

"NATURE and History make the man who is known ; but the man who knows makes Nature and History." Such is the theme proposed by Prof. Simmel, and developed with a somewhat tortuous subtilty. His object is, along with a refutation of Historical Realism, to lay down in broad outline the *a priori* element in historical knowledge, and so to carry on the work of emancipation begun when Kant freed the spirit from the bonds of Nature. For history, although the history of the spirit, and thus apparently of Freedom, if in fact something given, a reality, a super-personal power, would be no less a tyranny than Nature. Prof. Simmel did not see the problem or what he regards as its solution so clearly in the first edition of this book (1892), and the present edition is to be regarded as an entirely new work, the very pages adopted from the former edition altering their meaning in the new setting.

The Neo-Kantian attitude towards the problems of history adopted by Prof. Simmel is expressly repudiated by Herr Spranger as incapable of doing justice to the richness and complexity of the spiritual life. Against Prof. Simmel himself (he only knows the first edition of his work) he has little to urge, although that little appears to me full of force. In criticising the attempts of the Kantians generally, he remarks that the sundering of form from content, the assumption of universally constitutive forms and of a fully undetermined, indifferent matter does not correspond to the facts and leaves the problem unsolved. Such formal principles as they elicit contain either too little or too much. When they contain too much they lose the character of a simple intellectual formula. Thus his criticism of Simmel is that his *a priori* of history really contains in itself the whole inwardness of the comprehending subject. The *a priori* of Rickert is of the other kind, a formalism incapable of saying in what the values recognised by History consist. In order to maintain the values in undiminished actuality, one must make use of psychological analysis, and dismiss the thought of being able to deduce them from epistemological principles. Psychologically experienced necessity is the highest category from which all the others that may be established by analysis are to be derived. In fact, the process of historical science must be directed upon psychological comprehension, no super-psychological standpoint is possible. It is true that psychological comprehension

finds its limits in metaphysical facts: the self cannot be raised into the sphere of comprehension; only we must not base on Metaphysics what can be understood through Psychology. Humboldt's *Ideenlehre* marks the point where the definite division of the psychological understanding of history begins to separate itself from the metaphysical. When Humboldt says, "*Auch die Idee kann nur in der Naturverbindung auftreten*," this clinging to the actual is the decisive point (26). The philosophies of history are not to be proved, established, criticised, but merely "understood," as psychical structures. For the purpose of Understanding, history and society must be viewed as condensed psychical structures. They are like crystals, and must be brought once more to the fluid condition of psychical occurrence to exhibit the conscious or unconscious teleology which has been operative in them. The theatre of experience always remain the individual. It seems inviting to recognise the State, Religion, or Economics as objective teleological connexions; but an end only exists where a value is experienced; and unless, with assumptions of an objective spirit, a folk-soul, or what-not, we are content to abandon Psychology for Metaphysics, we must be content to refer everything to the given consciousness of the individual souls, and to measure everything only according to its significance for individual systems of energy (76).

Herr Grotenfelt's work differs very much from the two just mentioned. The presentation is preponderantly and deliberately phenomenological. It is an effort to analyse, discuss and compare the most important historico-philosophical principles of value, whether consciously applied in philosophical reflexion, or latent in the judgments of historians or in the popular view of history. It is a valuable little summary, clearly and interestingly written, and the result of a wide and thorough acquaintance with the literature of the subject. Herr Grotenfelt offers his investigation as a contribution towards the clarification and illumination of historical evaluation. It is perhaps also an effort to secure for historical empiricism as decided an influence as possible upon the construction of historical ideals. The author's own conclusions, to which we shall return, bring him very much in line with Prof. Eucken, whose views are sympathetically referred to as sound in the main.

These three books are an interesting evidence of the sustained activity of Germany in the investigation of problems arising out of the study of history. The difference between the writers is mainly one of emphasis, and their conclusions unanimously idealistic. Prof. Simmel's is, of course, an immensely clever and ingenious little book, which perhaps just misses producing conviction. We shall consider his views in some detail. His conclusions are in great part admitted without his apparatus of formal terminology by Spranger. The latter goes more directly for what is after all the main point, that, while we carry the consciousness of some

whole, and understand each individual process from its place in this total system and its significance for the same, this is only possible if this whole and its structural connexion is in some way actually experienced. He quotes from Dilthey: *Hier ist die Innerlichkeit des Beurteilers, der den seelischen Strukturzusammenhang tatsächlich oder durch Phantasie in sich erlebt, das Erklärungsprinzip für die Erlebnisse der Objekte* (23). The real weakness of his purely individualistic-psychological position is admitted when Herr Spranger says that he who adopts his point of departure must make the "*relative Gleichartigkeit*" of psychical constitution an undemonstrable postulate (17). After that why fight shy of the *a priori?* He admits with Prof. Simmel that our subjectivity decides our comprehension of history; we bring the form for the comprehension of the connexions (82). The major premiss in the logical component of the complex process of interpretation—which really resists formulation—might, according to him, be formally expressed: "*Alles Seelische ist einer teleologischen Bildungsgesetzlichkeit unterworfen*". Logical characterisation is, perhaps, a little misleading. Herr Spranger devotes great attention to the question of *Typenlehre* (94 *seq.*), the intelligible type being at once the result and the presupposition of scientific investigation. I can only refer the reader to his sections on history and epistemology, history and psychology, where there is much interesting discussion. Nearly every point he makes, however, finds its somewhat more artificial expression in Prof. Simmel's work to which we now turn.

Prof. Simmel treats, i. Of the Intrinsic Conditions of historical investigation; ii. Of historical laws; iii. Of the meaning of history. i. He endeavours to overcome the difficulty of regarding history as applied Psychology, which is due to the discrepancy between law and individuality, by ascribing to the soul an original quality upon which should supervene laws universally valid for every soul. From this combination would result the empirical psychical phenomena, which could thus, without infringement of the universality of the laws, be different in the case of each individual. Thus Prof. Simmel admits at the outset a '"real" *a priori*' (3) which is surely an element recalcitrant to any mere manipulation by historical categories. It is to admit a metaphysical principle, as it appears to me, which an epistemological Idealism such as Prof. Simmel's cannot very well reduce further to any mere spiritual elaboration of Reality, as, perhaps, his argument requires. History, he says, remains an application of psychological laws of unconditional universality; but the material on which they work—never to be extracted from the laws themselves, being rather the condition of their realisation—falls to be regarded as infinitely manifold, and necessarily results in realities of incomparable and irreducible individuality. It is an *a priori* proposition that the soul of each other person is for us a unity, *i.e.*, an intelligible connexion of processes, through which or as which we know

him. Thus we are led to complete the psychical facts revealed in a fragmentary way by visible occurrences, and even to eke out the external in harmony with what we conceive to be the internal facts. Ambiguity begins with the question, where then in general Consciousness forms the foundation of the visible occurrences; or where they ensue from unconscious forces, as when we have to explain the actions of masses; or where we accept the self-sufficient concatenation of impersonal forces? (8-19). The facts of individual psychology can only be understood, put in order and valued when they emanate from a definite character, which in turn can only be inferred from these particulars. The principles according to which history unconsciously proceeds in dealing with a group has yet to discover its epistemological theory; whether the unity of the group is constructed according to the psychical processes of its leaders, or according to its average type, or according to the majority. The psychical context, the space left for deviation, the eking out of the manifold moments to a complete picture, in short that which we call the unity of personality, is manifestly a methodical postulate, apart from which we should never attain to the orderly comprehension of historical data. It is an *a priori* which alone renders history possible. The logical terminology must not blind us to Prof. Simmel's concessions to psychology: "*Der Schluss also, der bei gewissen gegebenen Handlungsweisen einer Person auf die Möglichkeit oder Unmöglichkeit anderer gezogen wird, ist nie ein unmittelbar logischer, sondern hängt von einer realen psychologischen Erfahrung als Obersatz ab*" (23).

The spiritual reproduction necessary to historical understanding is discussed by Prof. Simmel in a very interesting manner (30-8). Psychical reconstruction, he says, which legitimises the external occurrences takes place within a category, as it were in an aggregate condition of the presentation. Certain presentational complexes are accompanied in us by the feeling that they have typical validity, the one presentation giving of itself an indication of its connexion with the other independently of the momentary condition of the soul which realises this inner relation of the presentations in the subject. There is a sort of super-personality of the psychological connexions themselves. Prof. Simmel tends to describe this psychological quality as conferring universal validity; but at one place (33) he calls it a feeling of psychological probability. It is surely not more than this. So far as it exists it undoubtedly forms the criterion as to whether an image growing up within the soul is entitled to be regarded as of objective value. We have here, says Prof. Simmel, a completely peculiar synthesis of the categories of the Universal and Necessary with that of the purely individual, or more exactly it is beyond such opposition. A historical person would not be intelligible in his unique appearance, if he were not capable of being grasped and reproduced as a timeless association of psychological elements, thus giving to this category the signifi-

cance of a universal law, although each such association is historically unique. We conclude from the kind and degree of one psychical element to that of another, not in syllogism, which has in view the universally valid, but in a synthesis of the phantasy which has the right and the power to confer the force of the rational upon the contingent. Historical projection is, according to Prof. Simmel, akin to that of space. It is not that something is done afterwards with the ready-made and consciously subjective presentation; rather the form in which it fashions itself *is* already the historical. Historical truth is no mere reproduction, but a spiritual activity, which of its material—given in reconstruction—makes something which it is not yet in itself; not merely through the epitomised grasp of details, but by virtue of the questions it asks, the significance it elicits, fashioning the past to a presentation which is worth our while. The categories of history may be regarded as those of a higher power to which we raise a material which has passed through the category of *Erleben.* The problem of the philosophy of history, so far as it is epistemological theory, is to determine the *a priori* categories through which original and reconstructed experience becomes history as science (43-52). As the unity of the Kantian "object" is nothing else than the unity of Apperception, so is the unity of the objective personality for historical knowledge the unity of consciousness of the cognising ego. The more decidedly the data offered by historical man hold in fee the quality of potential unity from their origin in the ego, the more surely, widely and deeply can the apperceptive unity of the knower function on them. Thus it can effect unity more readily in the case of great than of average personalities, although the content of the latter is more readily intelligible. It is the common tendency of historical Realism and Idealism, to attain to the reconstruction of that which happens by withdrawing from the constitution and peculiarity of personal life upon that which is universal in persons, and therefore simplest—the psychical minimum of the historical occurrence (56-64).

ii. We have now to notice Prof. Simmel's treatment of law in history. The historical laws hitherto established exist through an unjustifiable simplification of complex material. The factors in such laws are never constant, so that they are really only valid for absolutely identical repetitions which never really occur. To page 70 he appends a somewhat paradoxical note, according to which the problem of the union of causation with the apparently lawless within the life of the soul is insoluble so long as one only thinks of causation in the form of universal law, admittedly the only form in which it can be *known.* If, however, you separate these two concepts, and admit that causation is at least possible in individual form, then the irreproducibility of psychical consequents indicates no lawless freedom, but only that the unrestricted validity of the causal content has, in an extreme case, become so contracted as to issue in a unique effect.

That which is alone real, he continues, are the movements of the smallest parts, and the laws regulating these. On combining a sum of these movements to a total occurrence, we cannot lay claim to a special law, since already, through these primary laws, and through them alone, every movement that takes place finds its sufficient explanation and derivation. Since historical laws apply to the fates and evolutions of totalities of which the individual man is the simple element, the laws of individual psychology would seem to be actually the laws of history; but the epistemological interests of history may allow or demand as its specific *a priori* that the historical group should function as its "unity". Indeed the unity to which the personal life of the soul combines its contents is only formal and functional, while these contents themselves demand for their explanation laws of the whole cosmic process. Historical occurrences are made up, not of the psychical unity, but of its contents, and these find in it and its laws by no means their adequate genetic explanation. To put it in a word, Prof. Simmel believes that the so-called historical laws are an anticipation of an exact knowledge of historical processes, in the same way as metaphysical ideas are of the cosmic process as a whole.

iii. The facts of history, says Prof. Simmel, are subjected to an entirely new movement of thought when philosophy grasps them as its object, asking if the whole possess a nature and meaning not to be deduced from any single particular, and seeking to learn what absolute being, what transcendent reality lies behind historical phenomena. Alongside this metaphysical, but still purely theoretical question, there is that of order and emphasis: what we may call the valuation of history (114). Besides the distinguishable aspects of the valuable and the important, we have another category, originating in our emotional reaction, that of the extreme and its correlate the typical. The reflexions cast by our speculative and non-theoretical interests upon the events of history are the elements of historical Metaphysics. Historical knowledge is based on two elementary interests: that in the historical content and in Reality (122-7). The threshold of historical consciousness may be defined as lying where the consciousness of Being intersects the consciousness of importance of contents (139). The boundary dividing history from the abstract timelessness of psychology is drawn through the fact of Being, as the fact of Importance divides it from the science of Nature (142). However much a Metaphysic of History may be a play of phantasy, its deepest justification lies in this that its roots are the interests but for which there would have been no knowledge of events (143). Prof. Simmel does not attempt to pursue all the formative, super-theoretical and metaphysical presuppositions, but confines himself to exhibiting their activity when one deals with Progress and Historical Materialism. This is so obvious in the case of progress, where the subjectivity imports an ideal value into a series of facts, and where the unity

of the subject of progress cannot be dispensed with in the case even of an objective spirit, that I will not linger here. With the consideration of historical Materialism we come to something more essential to the sustaining of Prof. Simmel's main contention. Just because it claims to be the most immediate copy of actuality, and just because in it the formation of the merely given in accordance with theoretical and super-theoretical demands and assumptions may be followed step by step, it is of peculiar importance, he considers, in the overthrow of historical Realism. It mistakes for a constitutive principle one of merely heuristic and problematical application. The only meaning it retains is that events occur *as if* man were governed by economic conditions and motives. Materialism has never understood that history is spun out of many different threads; for it economic factors are, as it were, the thing-in-itself, and it believes in a kind of parthenogenesis of economic conditions (153-7). What Prof. Simmel is aiming at is not an unfruitful criticism, but to exhibit the contribution which this realistic theory of history can make towards the refutation of historical Realism. The reciprocal influence of all historical factors we cannot penetrate, and since it alone constitutes the real unity of history, each unified picture possible of the total process only comes into existence through constructive one-sidedness. In their opposition to Ideology materialists forget that to deny any activity to the Idea in history as an entity, a metaphysical energy, is not to exclude the possibility that it may possess it as a psychical occurrence, and that it consequently in no way follows that the concretely active forces of movement must be economic (164).

The epistemological Idealism of Prof. Simmel opposes Ideology likewise, because it is an epistemological Realism, to which history is not a peculiar spiritual elaboration of Reality according to the formative categories of our knowledge, but a copy of that which happens as it really is—only that this real is metaphysical and spiritual. Prof. Simmel denies that his conception is sceptical. History deviates from the immediately experienced or given reality —that which we call reality straight-away—not because it cannot reach it, but because it will not. Only he who seeks to reduce to a mechanical congruence that which is only a functional relation could regard this as scepticism (167-8).

It may seem to some that Prof. Simmel allows altogether too much force to the materialistic conception of history. Is an historian entitled to relate his object to a particular centre, and if he is allowed to make this abstraction for scientific purposes and succeeds in placing all the psychical processes in causal relation what is the result? A whole series of detestable make-shift parallelisms. If history could be treated "as if" fully explicable by economic conditions that would be sufficient for many people; they would not be comforted by the assurance that it could also be treated "as if" something else were true. It seems to me that Prof. Simmel goes altogether too far in regard to the plasticity of

the material of history. He seems to permit a "descent of speculation upon the concrete events" not easily compatible with leaving the latter unimpaired in the purity of exact facts. That history is always only an approximation to the truthful record of these is easily granted; that it recognises its purpose as other than the record of that which really happened, that it deliberately turns away from reality to adopt towards it something like the standpoint of art is very difficult to believe.

Herr Grotenfelt must be noticed more briefly than he deserves. I should like to call attention to the interest of his historical matter, although there is no space for detail. The principal historico-philosophical ideas of the idealistic, speculative philosophy and the classical period in Germany may be expressed, he says, as a synthesis and luxuriant development of Herder's Idea of Humanity and the Kantian principle of the full development of human capacities. The theoretical deduction of practical values in the Post-Kantian systems is, he says, more apparent than real: all such systems are really based on faith. Perhaps too little interested in the problems of practical life, they demand an inner freedom of the spirit, unrestrained activity of the whole, the true, above all the spiritual nature of man. For a time the Hegelian doctrine which found this in the universal, treating individuals as mere transition-points in the development of the Idea was received with animation, and the different forms in which the one common spirit had realised itself were treated as the only things worth consideration in history; but it was impossible to attach unconditional value to empty forms and abstractions. The value of all culture must in the last instance be found, not in the objective, external products of culture but in the effect of these upon the life of the human soul (85).

We have the usual refutation of Hedonism, but Herr Grotenfelt admits that scientific disproof is here of little avail. Our attitude in this regard is at bottom an affair of our will. It lies in the nature of the case that the highest ethical ideas cannot be proved, only ethical rules subservient to them. So much is certain, rejecting all hedonistic standards of value, the popular consciousness (which is well represented by Carlyle (134) remains unshakenly idealistic. On closer examination, we see that the great variety of views found in our more profound thinkers regarding the highest standard of value have close affinity with those of the classical German period. Thus Paulsen puts it as "*ein geistig geschichtliches Leben in dem für die Betätigung aller menschlich geistigen Kräfte und Tüchtigkeiten Raum ist*," Schuppe as "*die Steigerung der Bewusstseinsklarheit*, just another way of saying *die Steigerung des eigenen Wesens*. That which is essential and interesting in all these theories lies in the separate characteristics with which they provide their ideal, not in their abstract *Grundprinzip* as such.

Herr Grotenfelt discusses the practical politician's problems at some length (146 *seq.*). He endeavours to establish an analogy

between the development of international ethical ideas and that of a system of justice. Perhaps he shows deficient recognition of the differing degrees of consciousness of the units related within each system. If nations were fully self-conscious personalities the ethical code would be strictly applicable to them; but statesmen deal with the guidance or divergence of forces that are mainly subconscious but of tremendous insistence and low ethical import. "Realistic" politicians, as Herr Grotenfelt says, would like to claim for their nation a monopoly of the right of self-realisation and of profit at the cost of others; but the most "idealistic" politician has simply to do with the fact that his nation also is claiming its share in such good things and steadily refusing to be exploited. While quite admitting that the end of all political striving is the education of the nations to higher intelligence, to a more humanised way of thinking, to altruistic feelings, to spiritual endeavours, there will always remain a vast difference between the possibilities of development in individuals and nations, so that, when acting as a patriot a man must do—and indeed ought to do—things not competent to him in his individual capacity. Hence our differing estimates, say, of murder and war, which Tolstoi and others have confused through failure to bear this distinction in mind. It remains true that nationality itself may have to be superseded as a hindrance to ethical advance; but at present that it is neither the case nor the question.

To return to Herr Grotenfelt. According to him the *a priori* postulate that historical events unroll themselves with an inner rational necessity is arbitrary, a mere superstition. There is no such external norm of value: we might sometimes wish there were. But it is better as it is; the elevation of the spiritual over everything external lies just in this that the spirit discovers norms in itself which raise it above everything factual. The kernel, and that which is actually valuable in all historical culture, is nothing else than the development of a noble life of the spirit in the individual human souls, the fostering of those properties and activities of personality which we intuitively value as peculiarly essential and precious. Personally Grotenfelt unites the feeling of the worth of the ideal goods in history with the faith that they are a world-power. He binds his historical, as also his ethical values together into the thought and feeling that it is our highest task to contribute with our best powers to the realisation of the divine, the eternal in humanity. There is, he holds, some relation between the historically achieved development of men and those highest, super-historical, spiritual facts shadowed forth in idealistic and religious *Ahnung*, although we cannot make it clear. For himself Herr Grotenfelt is only able to say that he believes the point of transition from the temporal to lie in the purely personal, internal *Gesinnung* of individuals.

DAVID MORRISON.

Einführung in die Philosophie der reinen Erfahrung. Von JOSEPH PETZOLDT. Zweiter Band. *Auf dem Wege zum Dauernden.* Leipzig: Teubner, 1904. Pp. viii, 341.

THIS second volume of Petzoldt's work—the first was reviewed in MIND, 1900, page 389—is so complete in itself that it may be regarded as an independent treatise. It seeks to show that man as an organic type is still in course of rapid evolution, that he is tending however to become a stable or finished type, that it is possible to determine in outline this ultimate form of humanity, and that thereby the only trustworthy basis for ethics, æsthetics and the theory of knowledge is secured. The fact of evolution is proved by the existence and by the variety of the common norms of conduct, of beauty, of thought, and other similar uniformities or regularities in human behaviour. The evolution is not however one of thought merely, of knowledge as an abstract system, as Weismann supposes: it is an evolution of the organism itself, expressed by modifications of brain-structure. The modifications are transmitted not through the germ-plasm, but directly, from individual to individual: nor are they gained in the way of natural selection and the struggle for existence between individuals. The selection takes place within the mind of the individual; the successful variation comes "full-fledged" into operation; hence the far greater rapidity with which such evolution proceeds. Hitherto no explanation has been given of the manner in which complex organic forms are supposed to have arisen from minimal variations in simpler forms, through inheritance and natural selection. In all probability, according to Petzoldt, all natural species have arrived at their present stable forms through periods of rapid evolution—similar to that in which man now is—followed by long pauses after the stages of relative stability were attained. Limits to evolution are set however by the nature of each organism itself, and this is true of the human as of all other forms; the tendency to stability is illustrated in our automatic actions, in the elementary and universal modes of feeling and of thinking, in all our concepts, categories, laws: in every case these have a practical origin and meaning,—they represent modes of reacting upon recurring phases of the environment. All human endeavour is towards stability or permanence. Such prevalent conceptions as those of Monism, of Determinism, of Evolution, satisfy just because they offer natural halting-places in the effort of mind to comprehend its surroundings. The true end of thought is not to mirror the universe, but to "characterise conceptually" the whole environment of man, *i.e.* to make him master of all the means of living and of furthering life. But the elements with which this process has to deal are finite in number, therefore it also is finite and must ultimately cease; *i.e.* human evolution is tending towards a stable form. The tendency towards stability in mind- and brain-development is a direct consequence of the similar tendency in all physical sys-

tems. A physical difference between the parts of a system, independently of outside forces, always decreases—as in differences of level, of pressure, of temperature, of potential. But "vital differences" are merely complexes of elementary physical differences; the psychical tendency towards stability is thus in principle explained. The evolution of man is therefore approaching its inevitable end; within humanity as a whole all desire for further change will cease, all human ends will be achieved at once by the speediest and by the simplest means. Thus permanence and stability become the true norms of morality, of æsthetic taste, of the pursuit of truth. Throughout, evolution is determined in relation to the physical environment; the final form will thus involve the suppression of those cortical systems with which there is correlated mentally the belief in an Absolute, the idea of a "world in itself," or the hunger after an "ultimate truth".

In view of many facts recently brought to light, it may well be doubted whether the completion of our knowledge is so near as to come within the range of "practical politics," while, as befits a true optimist, Petzoldt seems curiously forgetful of human inertia and of the weakness of human will.

When however we turn, in the second section of the volume, to the outline of the permanent form towards which man is progressing, the results do not appear widely different from those of other Utopian systems standing on a more empirical basis. The *struggle* for truth will be replaced by its *possession*, in final stable concepts, by the race. Finality of evolution does not however involve a standstill within individual life, learning and work will be as necessary as before. The completion of knowledge will lead as a consequence to the perfection of social institutions and customs; there will remain no differences of race, of rank, of property, of income. The ideal state is not one in which all men are alike; rather it is on the natural inequality of men that progress depends —not uniformity but the greatest variety of minds, under absolutely equal institutions, is the goal. The moral end for each individual of the race remains,—the perfecting of his personality and gifts in the service of his fellow-men. The possibility of degenerate individuals does not seem to have occurred to Petzoldt. In the world of Art also, a classical realism, aiming at the essential, the permanent, the stable, in the forms of nature and of life, will replace the romanticism, naturalism, impressionism of to-day.

Perhaps the most interesting chapter is the last, which details the form of truth, *i.e.*, the view of reality, which is to correspond to the final structure of the human brain. As was to have been expected, it coincides generally with Petzoldt's own philosophical view. Psycho-physical Parallelism, we are assured, is or ought to be as self-evident as that two and two make four (pp. 292, 293); the argument does not however quite bear this out. The mental dispositions and habits on which our thinking and acting depend, imply, it is said, uniform and necessary connexion between the

elements or conditions of these systems. But such connexion is never found *within* the psychical world, therefore every psychical value is conditioned by *physical* processes, *i.e.* those occurring in the brain of the individual. Of course the correlation of mental disposition and brain structure may be admitted, but the validity of the whole argument depends on the covert assumption that the mental activity has had no influence upon the development of the structures with which it in its present form is in correlation. This is quite contrary to what we know of other cases of tendency or disposition. The negative argument is more difficult to understand; the unity of consciousness, it is said, which means that anything may be held together in thought with any other thing, is inconsistent with the possibility of necessary connexion between psychical and psychical. Is not this to confuse thought as a process with thought as a content? The same content may occur and recur in different relations, relations other than those with which it was at first given; but each thought as a process is as unique as any physical change, each thought-system as unique as any physical thing. As a matter of experienced fact the conditioning by mental processes both of other mental processes, as in active memory, and of physical changes, as in voluntary movement, is as clearly evidenced as the converse conditioning of psychical by physical.

The absence of necessitation within the psychical world is also the chief ground on which Idealism is rejected from the final conception of reality. The mind is driven to look beyond itself for the necessary conditions of its changes. Both I and not-I are necessary for thought, and each in closest relation to the other, since each is logically unthinkable apart from the other. It follows that there is no absolute opposition between them, they are not two distinct parts of the given, but different sides, aspects (*Beleuchtungen*), or modes of comprehending one and the same content. Thus things are as they appear to us; not molecules and atoms are their elements but red, blue, hard, etc. The existence of the object of perception is independent of the fact of its being perceived:—this follows again from the incomplete determinateness of the succession of perceptions within itself. But there is no meaning, according to Petzoldt, in the question, "What then is the reality behind the individual perceptions?" There is no *thing-in-itself* which remains unchanged while my sensations of it change: nor is there any absolute *world in itself*. Everything is in constant change, and everything is correlated with everything else. The world is dependent not on the thought of this or that individual, not on the act of thought, but on thought in general (*überhaupt*): "The world is not my world, rather all have part in it: we do not perceive its *appearance*, but itself in all immediacy. The immediately given is the combination of elements there before me, outside my head. I have not sensations within me which I then project outwards. The tree which I see standing there is *numerically* the same which another would see in my position, and the same which

those standing by me see, even if it be not *qualitatively* the same." Moreover, just as the world is not *in* the self, *i.e.*, in the mind of any individual, so recollections of it are not in the mind ; although recollections and all other thoughts and characterisings are numerically different for different individuals,—are given in a particular way for each,—still the recollected fact is not subjective merely but real, *i.e.* it has a physical existence which is one with its psychical existence.

It will hardly be agreed that Petzoldt has successfully bridged the gap, which even this new realism of Schuppe, Mach and Avenarius is compelled to recognise, between the individual experience—sensation or recollection—and the reality, whether physical, or psychical, or both, which is cognised in that experience. But the argument throughout the work is clear, vivacious, impressive in its wealth of illustrations drawn from the most varied fields ; it may not dislodge the Idealism or the Materialism against which it is equally directed, but it cannot fail to modify them.

J. L. M'INTYRE.

VI.—NEW BOOKS.

The Elements of Psychology. By E. L. Thorndike. New York: A. G. Seiler, 1905. Pp. xix, 351. Price $1.50.

Prof. Thorndike first became known to psychologists by his brilliantly original work on *Animal Intelligence*, published in 1898. Since that time he has not let the grass grow under his feet. Besides papers in various journals, we have had from his pen: in 1901, the monograph on the *Mental Life of the Monkeys*, the *Human Nature Club* and the *Notes on Child Study;* in 1903, the *Educational Psychology*, and a good part of the volume of studies entitled *Heredity, Correlation and Sex Differences in School Abilities;* in 1904, the *Theory of Mental and Social Measurements*. Now, in 1905, comes the *Elements of Psychology*. Prof. Thorndike apparently finds it necessary, or profitable, to publish his lecture courses as soon as the lectures have been delivered. Work put out in this way may very well be clever and original and suggestive; but it must inevitably show the marks of hasty preparation and of immaturity of judgment.

It was, perhaps, with some view of heading off this sort of criticism that Prof. James was "invited" to supply a preface to the present volume. "When I ask myself," says Prof. James at the beginning, "why any book from Prof. Thorndike's pen should need an introduction to the public by another hand, I find no answer"; though he adds, a little naïvely, that "his references to my works in the text that follows will, I am sure, introduce me to more readers than I can introduce him to by my preface": At any rate, the invitation was offered and accepted —accepted with enthusiasm. "Prof. Thorndike has more horror of vagueness, of scholastic phrases, of scientific humbug than any psychologist with whom I am acquainted. I defy any teacher or student to go through this book as it is written, and not to carry away an absolutely first-hand acquaintance with the workings of the human mind, and with the realities as distinguished from the pedantries and artificialities of psychology." This (and there is more like it) is a little hard on the prospective critic. The preface itself is, I suppose, a matter of taste. I can imagine that a letter of unstinted praise from one's master in science would be a very precious thing; but it would be something, I should conceive, that one would keep to oneself, and put away for one's children to read in the after time. Prof. Thorndike prefers to print it in the forefront of his book: where, no doubt, it has a commercial value.

The work itself, after a brief introduction, falls into three parts: descriptive or structural psychology (pp. 19-119); physiological psychology (pp. 120-183); and dynamic psychology (pp. 184-335); and ends with a selected list of topics for special study. The third part is thus almost as long as (if we allow for the cuts in part ii. it is a little longer than) the other two parts taken together. This apportionment of space is justified both by the author's predilections and by the interests of the students for whom the book is primarily intended; hardly by the fact

that dynamic psychology is "the least technical but at the same time the best organised and most instructive" department of psychology at large.

Coming to part i., we are struck at once by the title: descriptive *or* structural psychology. Any part of psychology, of course, may be descriptive. May we not have a description of mental functions? The author would seem to think so, since chapter viii. (of this part i.!) deals with the "functions of mental states". May we not have a description of mental growth and development? The author makes excursions into genetic psychology (pp. 21, 36, 63, 82, etc.). No harm, truly: only why 'descriptive *or structural*'? A structural psychology does not take account of function and of the course of evolution. Neither, one may add, does it shirk such problems as those of affective process below the level of emotion, of funded contents, of the analysis of 'feelings' of meaning and of relationship. The keynote of a structural psychology is analysis; and of analysis, in this part i., there is next to nothing. What, then, of the 'description'? Well! does it comport with a scientific *description* to give a rough list of the 'chief groups' of thoughts and feelings, from which are lacking not only such items as 'feelings of recognition' and 'feelings of hypothesis,' but also the simple 'feelings' themselves? or to say of the 'pseudo-emotions' (*i.e.*, of the æsthetic sentiments, of the various forms of *Einfühlung* that "they are on the whole rather a mystery"? or to define 'memories' as "judgments of one's own past experience"? or to confuse simple enumeration with scientific classification (p. 39)? or to dismiss fusion as "a combination, not of feelings, but of the processes in the brain upon which they depend"? or to decline the description of feelings of relationship because "it would be impossible to describe the feeling to one who had not felt it himself, and it would take rather a long statement to describe it to oneself"? Some of these positions may be condoned on the score of brevity, or of the writer's desire to avoid "pedantries and artificialities". Taken all together, they surely indicate carelessness and a lack of clear thinking. And there are other material points upon which criticism may fasten. The 'genetic' theories of space perception are thrown over with the remark: "It is perhaps doubtful if those announcing this third view really mean what they say"! The antithesis of focal and marginal is accredited to James (p. 95), who himself accredits it to Lloyd Morgan. The "thoughtful and ingenious student" is introduced, on pages 108 ff., to an epistemology which, if he really is thoughtful and ingenious, will make him gasp. The appeal to language is curiously common for a psychologist who insists, almost *ad nauseam*, on the continuity of mental process. So long ago as 1893 one of the pedantic and artificial psychologists who do make reference to 'chronoscopes' and to 'acoustical and optical technics' pointed out the disparity between experience and report of experience. But after all the pedantry and artificiality of experimental psychology mean — if one may parody a definition of James' own—nothing more than an unusually obstinate effort to think accurately. This effort the author of our part i. does not appear to have made.

Part ii., on the physiological basis of the mental life, must be dealt with more briefly. The author writes throughout in terms of the neurone theory. In this he is probably justified; though the hypothetical character of the exposition might, perhaps, have been more clearly pointed out in the Preface for Teachers. Less justifiable is the extreme emphasis on the centre, to the practical neglect of the periphery. The section on the 'laws of brain action' mentions inhibition, but not facilitation; and the section on the 'physiological correlates of particular groups of mental

states' says nothing of the 'states' proper, of attention, dreaming, etc. This latter section should have been supplemented by further references.

In Part iii., the author is upon his own ground, and the book shows a marked improvement both in method and in content. The exposition is conceived on broad lines: "the presence of original tendencies to connexions and of satisfaction and discomfort as qualities of certain feelings, the power of satisfaction to strengthen the connexions producing it and of discomfort to weaken those producing it, the natural influence of frequency, recency and intensity on connexions; these are the ultimate laws of dynamic psychology". At the same time, the writer makes use, as free as judicious, of concrete examples: in the Pickwickian language of James' preface, his "superabounding fertility in familiar illustrations amounts to genius". I cannot but feel that the part would have gained in clearness and definition if the structural vehicles of the functions discussed had been adequately described in part i., though I realise that the strength of this feeling may be due to my habitual direction of thought from structure to function: Prof. Thorndike evidently thinks, as habitually, from function to structure. I do not quite see, *e.g.*, how the polemic against the necessary presence of affective components in motive squares with the causal efficiency assigned to the feelings of satisfaction and discomfort. Nor do I see how 'instinctive attention' should turn rather to expected than to unexpected, and to pleasurable rather than to painful stimuli. It seems, too, a little late in the day to subsume the facts of colour contrast and of visual after-images to a general law of relativity. Nevertheless, the part is well written, and the beginning student will learn much psychology from it.

Evidences of haste, of imperfect revision, are all too obvious throughout the work. Thus, 'preperception' is given on page xii. as one of the topics to be treated by a dynamic psychology, and is found in the index; it does not occur in the passage of the text to which the index refers. 'Choice' is also specified on page xii.; but the index reference is to part i. The word 'motive' does not occur in the index, though it heads a paragraph on page 284. Instances of this kind could be multiplied. Most curious of all, perhaps, is the fact that—with the exception of a few magazine articles—no single date is attached to the references appended for further study. Nor are the books dated that are recommended under the various chapters for collateral reading. Yet the chapter references to Wundt's *Physiol. Psych.* are to the edition of 1893, and not to the current fifth edition!

E. B. T.

Sociological Papers, 1904. London: Macmillan & Co., 1905. Pp. xviii, 292.

Through the initiative of a number of experts in various branches of social study the Sociological Society was established in 1903. The aims of the society, as stated in the introduction by Mr. Bryce and in the appendix to this volume, are scientific, educational and practical. "Its field covers the whole phenomena of society. The origin and development, the decay and extinction of societies, their structure and classification, their internal functions and interactions have to be observed and compared. . . . The many standpoints from which social phenomena may be considered have thus all to be utilised. In this way the society affords the common ground on which workers from all fields and schools may profitably meet . . . all contributing their results to a fuller Social Philosophy" (p. 284). It has in view, further, the diffusion of sociological knowledge by the collection of books and periodicals, by arrangements

for lectures, and the investigation and encouragement of institutions for Research (p. 286).

A society with such aims needs no justification. As far as one knows, there is no similar institution in this country. And when we remember that sociology has hitherto received no adequate recognition in our Universities—a defect which contrasts strongly with its assured position in American and Continental Universities—the foundation of this society must be regarded as an event of considerable importance for the development of social science.

The volume consists mainly of six papers read before the society, to which are added the discussions and written communications elicited by four of them. Two of the papers are described as "Pioneer Researches in Borderland Provinces"—the first, by Dr. E. Westermarck, is a brilliant essay on "The Position of Woman in Early Civilisation"; the other, "Life in an Agricultural Village in England," by Mr. H. H. Mann, is an account of the economic conditions of a typical agricultural community. Applied Sociology is represented by a short paper on "Eugenics," by Dr. Galton, which recalls in principle the discussions in the *Republic* on the production of the best type of citizen. Prof. Geddes contributes an article on "Civics".

Probably the main interest of the volume centres in the paper by Mr. V. Branford "On the Origin and Use of the Word Sociology," and in the abstracts of papers by Mr. Branford and Prof. Durkheim "On the Relation of Sociology to the Social Sciences and to Philosophy". Prof. Durkheim's views are expanded in an article reprinted in the present volume from the *Revue Philosophique*, May, 1903.

Excessive condensation has occasionally resulted in obscurity, and, as it seems, suggested misunderstandings. It is no doubt unfortunate that the writers have not indicated explicitly their attitude to what may be termed the sociological dilemma (*cf.* Giddings, *Principles of Sociology*, p. 28). Certain expressions have conveyed the impression that the writers regard as exclusive of each other the alternatives—sociology is *either* the collection of the various social sciences *or* a science wholly distinct from these. But M. Durkheim's conception of sociology is not vitiated by the false antithesis here implied. His purpose is to disclose the inadequacy of the old "abstract" sociologies, and to show that a true sociology must have as its subject-matter the concrete details of social experience supplied by the various "specialisms" (p. 200). But it is not maintained that because sociology must get its matter from the social sciences it is therefore merely a "general title" for these sciences as a collection. The unity of the biological sciences, for example, is not merely nominal; it is a genuine unity resting on the fact that one distinctive type of experience is considered in its different aspects by those different sciences. Similarly, sociology is a distinctive science with a distinctive subject-matter—social experience as such. "Above the particular sciences there is room for a synthetic science. . . . It belongs to this science to disengage from the different specialist disciplines certain general conclusions, certain synthetic conceptions" (p. 257). The function of sociology is to impart unity to the various social sciences by showing that the different aspects of social experience are not isolated or capricious, but closely related. Only by such a unification, by the "interpenetration of diverse technical studies with the conception of unity," is an adequate science of society possible. This doctrine, usually associated with the name of Comte, is really a return to the idea never absent from the best thought of Greece. No one, for example, has shown a keener perception than Plato of the intimate relation between the political, moral, economic, æsthetic, and intellectual conditions of society.

Much prominence is accordingly given to the general question of methodology. The "inclusion of human phenomena within the unity of Nature" and the "systematisation of the special sciences" are the urgent problems confronting the sociologist. Difficulties have been suggested here—in some cases perhaps needlessly. Urged primarily against the religious or "metaphysical" dualism with its fictions of "free will" and "divine interference," the Comtist conception has been viewed with suspicion. The fear of Naturalism passes slowly. But the conception 'unity of Nature' is quite compatible with a recognition of a genuine difference between physical and social phenomena, as M. Durkheim clearly shows (pp. 260, 261). And certainly Comte's principle (*cf. Pos. Phil.*, ii., 62, Martineau's Trsl.) properly understood is the "prime postulate" of a true sociology. M. Durkheim's insistence on this point is not unnecessary.

The problem of the systematisation of social sciences presents great if not insurmountable difficulties. It would be wrong to suppose, however, (p. 205) that the writers regard this task as the work of the logician as such. On the contrary it is rightly urged that an adequate organisation must be based on the results of investigation into the concrete details of social experience (p. 255). By what other means could the interdependence of different sciences be observed, or the points at which they acquire a significance other than social be discovered? But for this very reason any satisfactory scheme of classification must follow, not precede, actual achievements in the concrete work of the sciences. It is therefore very doubtful if, in the present state of sociological knowledge, "an abstract mapping out of the sociological field," claiming any measure of finality, is not premature. The "Newton of this subject" has not yet appeared. What principles can be suggested? Mr. Branford's account (pp 201, 202)—a most obscure passage—seems merely to emphasise the difficulty. Apart, however, from the formulation of any logical scheme of classification, it is true that the condition of any progressive movement is the effective recognition by the specialisms of the interdependence and unity of social phenomena. And Prof. Durkheim and Mr. Branford's account of the necessity of this is the point of main interest and importance.

JOHN SIME.

The Logic of Human Character. By CHARLES J. WHITBY, B.A., M.D. Cantab. London: Macmillan & Co., 1905. Pp. ix, 226.

The study of character, though the latter is dependent upon innate structure, cannot wait for the completion of cerebral physiology, at present in an embryonic stage; hence the author undertakes to present his theory. This is, however, not a genetic psychology of character-building, but "the task of tracing, step by step, the logical sequence of those essential principles which contribute to the formation of character," which, Dr. Whitby says, "is obscured by the natural tendency to test its accuracy by reference to the psychological process of development". We may, he allows, nay, we must, use such a reference, but we must employ it cautiously, remembering that even the highest principles are present, at least implicitly, in all stages of the career of every rational individual; and this seems to follow because character is "a manifestation of reason".

This description will, perhaps, have prepared the reader to expect a dialectic in which the life-complex of the real and the ideal, starting with psychological elements ranging from Sensation to Volition, rises through six Categories, thus:—

I. Psychological Elements.
II. First or Immediate Category. Implicit Character. The Logic of Custom.
III. Second or Formal Category. Personal Character. The Logic of Duty.
IV. Third or Real Category. Practical Character. The Logic of Action.
V. Fourth or Substantial Category. Social Character. The Logic of Piety.
VI. Fifth or Transcendent Category. Individual Character. The Logic of Freedom.
VII. Sixth or Absolute Category. Universal Character. The Logic of Creation.

There is some crude psychologising. On page 9 emotions are stated to be aroused "by the integration of associated sense-impressions". On page 17 grouped sensations are transformed into emotions. On page 133 emotions "are but thoughts in the making".

As we have said, all the faculties are regarded as simultaneously present from the first dawn of consciousness, though the author does indeed add the qualification, "in some inexplicable way". But, at any rate, the development which he wishes to trace is a logical and not a psychological development, so that, implicitly or explicitly, actually or potentially, he must have them all there at the same time.

A true judgment, we are told, is not completely true unless it commands universal assent, so that we have nothing true but the commonplace,—a strange doctrine for a writer who subsequently makes character depend on the amount of its initiative. Still it is, I think, said advisedly, for on page 124 the *norm* of human character seems to be one which shows a generally "approved balance of domestic, civil and religious duties"; and a true ideal must be practicable and must be realisable (page 154).

The tests of right action lie in conscientiousness and rationality, right reason being the standard of love (p. 135); all such actions as proceed from these conditions "are immortal contributions to the welfare of mankind". The moral sanction of family affection is based on an "inalienable community of interests," and our personal interests are ultimately indissoluble from those of the race. There is much force in the 'ultimately,' perhaps, but in any case such dicta as these need much more than mere assertion.

The word 'essential' is very frequent through the book. As the author states in his preface, and I heartily agree, what is "essential" must have reference to theory and purpose, so that perhaps I am right in supposing that, in any logical step or category, those qualities are essential which bring us to the next one. But if so, it seems obvious that, by choosing other essences, we might have made other dialectic steps equally well. This would look awkward for the development of an absolute and universal principle, which may hardly, without disrespect, be accused of opportunism.

Though to me this book arouses interest mostly by methodological dissent, there are several pages of sound practical wisdom and good psychologising.

W. H. Winch.

Psychological Medicine: A Manual on Mental Diseases for Practitioners and Students. By Maurice Craig, M.A., M.D., Physician and Lecturer on Mental Diseases, Guy's Hospital. London: J. & A. Churchill, 1905. Pp. viii, 449.

This book should prove a serviceable manual for practitioners and students. It is a good general statement of medico-psychological prac-

tice at date. An opening chapter on Normal Psychology is rather a series of working definitions of terms than a connected exposition; but, probably, the practical student will find this as suitable as more elaborate discussion. The answer to: What is Insanity? is somewhat vague and inconclusive. The causation of Insanity is discussed under familiar rubrics, such as heredity, education, religion, alcohol, sexual excess, physical disease, etc. The remarks under each head are somewhat highly general for practical use. The classifications of insanity are illustrated, but no sure principle of classification reveals itself. The author follows, on the whole, the usual clinical lines, and this, for his purpose, is certainly best. A general exposition on so elaborate a system as Kraepelin's would not be possible within the limits of the book, which does not aim at special case-analysis. States of excitement form one large class, states of depression another, but the cross-divisions in the varieties of mania, melancholia, etc., are so many that one doubts whether the time-honoured "states of exaltation" and "depression" are not more a hindrance than a help to the general student. Paranoia or chronic delusional insanity, dementia præcox, general paralysis, and some other leading varieties, are given with considerable detail. There is an excellent series of twenty-two plates of morbid nerve conditions. There are sections on the legal relationships of insanity and on treatment.

W. Leslie Mackenzie.

Paralysis and Other Diseases of the Nervous System in Childhood and Early Life. By James Taylor, M.A., M.D., Physician for Out-Patients, National Hospital for the Paralysed and Epileptic, etc. London: J. & A. Churchill, 1905. Pp. viii, 512

The author need not have offered any apology for this work. The diseases of the growing nervous system are so different from the diseases of the grown system that separate study is essential. The book is written from this point of view, and it is well written. The matter is well-proportioned, and the exposition is clear. The modern view is very manifest in the emphasis put on toxic influences. The book is purely medical. No prominence is anywhere given to the mental accompaniments of the various paralyses, and this is right from the author's standpoint. In a work where each part is carefully and well done, it is difficult to single out any section, but the discussions of hydrocephalus, chorea, night-terrors, epilepsy and infantile paralysis are of most general interest. It is obvious that, as nervous diseases are more closely studied, the proportion assignable to injury before, or after, or at birth, to infection and to similar environmental agencies, increases. It is even suggested that abiotrophy (Gowers) may be due to food or some toxic substance. It is well to see positive causes taking the place of *virtus dormitiva* and all that kind. There are seventy-four illustrations. In spite of the author's fear of over-expansion, the book would be much improved by the addition of a limited bibliography.

W. Leslie Mackenzie.

Histoire de la Philosophie Médiévale. Par M. de Wulf, Professeur à l'Université de Louvain. Louvain et Paris, 1905. Pp. 568. Deuxième édition.

Every scholar will appreciate the value of this work. Its perusal should put an end to all notion of the philosophic intellect having fallen asleep with St. Augustine to wake again with Francis Bacon,—of scholasticism

being mere formal logic, or a metaphysical unprogressive exercise of marking time,—and of all mediæval thought being swallowed up in scholasticism. M. de Wulf holds that John Scotus Eriugena (commonly miscalled Erigena), far from being the founder of scholasticism, was distinctly antischolastic. Antischolastic also, according to him, was the influence of Averroes in Europe from 1230 to 1600. Rejecting other definitions, he defines scholasticism as a system of thought common to St. Anselm, Alexander of Hales, Albertus Magnus, St. Thomas Aquinas, St. Bonaventura, Duns Scotus, William of Ockham, and other leaders, who differed among themselves, but agreed, in opposition to monism and pantheism, in maintaining a personal God, creation, free will, and a measure, greater or less, of Aristotelian philosophy, particularly the doctrine of matter and form. As might be expected of one enjoying the title of 'Doctor in Thomist Philosophy,' the doctrine of St. Thomas finds a systematic exponent in M. de Wulf. A modern reader is surprised at being told of Aquinas figuring among his contemporaries as a teacher of novelties, and in 1277, seven years after his death, incurring episcopal condemnation at the Universities of Paris and Oxford. His judges at Oxford were two Archbishops of Canterbury—the Dominican Robert Kilwardby and, after him, the Franciscan John of Peckham. The novelties complained of were certain Aristotelian opinions adverse to the Augustinianism in which the earlier scholasticism was conceived—notably the doctrine of the soul being the only form (ἐντελέχεια) of the human body, the absolute passivity of primordial matter (in opposition to the Augustinian *rationes seminales*), the simplicity of a pure spirit as being form without matter, and the philosophic possibility of the world having been created from eternity.

Scotus Eriugena, Abelard (of whom as a philosopher M. de Wulf speaks approvingly), John of Salisbury, William of Auvergne, Henry of Ghent, Godfrey of Fontaines, Ægidius Romanus, Siger of Brabant, Ockham, Raymund Lullus, Roger Bacon, John de Jandun, make a gallery of portraits sufficient in their diversity to show how far "one good custom" was from having "corrupted the world" of mediæval life. We have also an interesting catalogue of the library of a thirteenth century doctor. M. de Wulf pronounces that there were no Nominalists in the period of which he treats. But is it not Nominalism to refer to the free will of God those eternal intelligible essences, the basis of necessary truth, which St. Thomas and other intellectualists refer to the divine essence and understanding? This excess of voluntaryism was committed by three doughty Oxonians—Duns Scotus, William of Ockham and Thomas Bradwardine. Mill's *Logic* is a Nominalist book, and in their denial of necessary essences and intrinsic impossibilities these mediæval thinkers fall in with Mill. Treating of Greek philosophy as introductory to the mediæval, M. de Wulf identifies 'matter' in Plato's *Timæus* with μὴ ὄν and empty space; much might be said against the identification. The decadence of scholasticism in the fourteenth and fifteenth centuries, its impotence in the sixteenth, and the blind opposition of seventeenth century scholasticism to the new physics are duly lamented. Due praise is awarded to that new shoot of the old tree, the revived scholasticism of the Dominican and Jesuit schools in Spain. M. de Wulf justly insists that erroneous physics are no essential constituent of scholastic philosophy. He concludes: *La scolastique a tombé faute d'hommes, mais non faute d'idées.*

We commend M. de Wulf's work to students of Dante.

JOSEPH RICKABY.

Abhandlungen der Fries'schen Schule. Herausgegeben von GERHARD HESSENBERG, KARL KAISER und LEONARD NELSON. Göttingen: Vandenhoeck u. Ruprecht. Erstes Heft, 1904. Zweites Heft, 1905. Pp. 392.

The editors of these papers believe that the salvation of present-day philosophy lies in a return to, and sound development of, the Kantian Criticism. In the philosophy of Jakob Friedrich Fries they profess to find its true interpretation. The manifesto of the movement which is prefaced to the first series is written in a somewhat exaggerated tone. There is, we read, a popular and a scientific philosophy, and according as we regard the Kantian philosophy from the standpoint of popular appeal or of scientific development its history appears in a very different light. In the one case we have the series: Kant, Fichte, Schelling, Hegel, Schopenhauer, Nietzsche. In the other we have Kant, Fries, Apelt. "So werden in den Augen eines späteren, philosophisch reiferen Jahrhunderts jene zu ihrer Zeit in so glänzendem Ruhme stehenden Schwärmer keine andere Rolle spielen als etwa für unsere heutige Naturwissenschaft ein Patricius, Robert Fludd und Jakob Böhme. Kant, Fries und Apelt aber werden stehen bleiben neben Kepler, Galilei und Newton" (p. xii.).

The publications before us are interesting, but hardly justify these high claims. Three papers are devoted to a statement of Fries's fundamental positions and of his relation to Kant: 'Die kritische Methode und das Verhältnis der Psychologie zur Philosophie,' by Leonard Nelson; 'Fries und seine jüngsten Kritiker,' also by Nelson; 'Kant und Fries,' by Heinrich Eggeling. They certainly succeed in showing that the current criticism of Fries's method is not justified. That method cannot be adequately regarded as simply a relapse from the transcendental into the psychological point of view. Though Fries himself describes his method as psychological and empirical it is quite distinct from, and indeed opposed to, the empirical method of Locke. It is not genetic but critical. Primarily its appeal is not to individual experience, but through individual experience to reason. Fries's position seems, however, to remain open to the kindred objection that he has interpreted Kant's critical method in a subjectivist manner which is no longer tenable even in psychology. In declaring transcendental philosophy to be the science of inner experience he relies on a view of experience for which nowhere in these papers do we find adequate justification. It appears to be assumed as self-evident. "Der Gegenstand der transcendentalen Untersuchung, die den Inhalt der Kritik bildet, sind also Erkenntnisse a priori. Erkenntnisse aber erkennen wir überhaupt nur durch innere Erfahrung. Die transcendentale Erkenntnis der Kritik ist also offenbar Erkenntnis aus innerer Erfahrung. Hat also gleich transcendentale Kritik Erkenntnisse a priori zum Gegenstande, so ist sie doch selbst eine empirische Wissenschaft" (p. 41). That sentence presents both the reply to, and the justification of, the current misinterpretations of Fries.

There is much that is interesting and valuable in Fries's restatement of the Kantian philosophy. By equating understanding with reflective, and reason with immediate, knowledge, he brings into the forefront of the system the fundamental distinction between the analytic and the creative activities of mind, and simplifies Kant's very artificial distinction between creative understanding and reason, between categories and Ideas. By the principle of the self-trust of reason he escapes the opposition of speculative and practical reason. Space and time are alone subjective, and they constitute the barrier which renders complete satisfaction of reason impossible.

In keeping with Fries's insistence that acquaintance with the mathematical and inductive sciences is absolutely indispensable to the philosopher the remaining articles deal with the philosophical aspects of scientific problems. The titles and authors are as follows: 'Über Begriff und Aufgabe der Naturphilosophie,' by Apelt; 'Das Unendliche in der Mathematik,' by Hessenberg; 'Über kritische Mathematik bei Platon,' by Brinkmann; 'Bermerkungen über die Nicht-Euklidische Geometrie und den Ursprung der mathematischen Gewissheit,' by Nelson.

NORMAN SMITH.

Studien zur Grundlegung der Psychologie. Von Dr. HERMANN SWOBODA. Liepzig und Wien: Franz Deuticke, 1905. Pp. viii, 117.

This little volume contains three essays, one on Psychology and Life, a second on Association and Periodicity, and a third on Body and Mind. A short preface of a liberal nature announces that Truth develops in us without our co-operation and that intention to find it can only do harm. This is carrying objectivity rather far; but the author is on surer ground when he claims importance for Periodicity in mental life, an aspect which has received relatively little attention. He claims that it is truly a central problem giving new insight both into the deeper as well as the more superficial problems of psychology.

We know that a synthesis of atomic independencies is not a whole and that a 'Mosaikpsychologie' is not satisfactory, and doubtless there are evils in the application of an unmodified scientific method to psychology. Truly we get types and not men, and the psychologist, as such, is not necessarily a good judge of character. But is any method other than that of abstraction and analysis open to us in this or any other science? Must we not, leaving the immediacy of sense, construct an articulated series of scientific judgments, coming back by synthesis and inference, as far as may be, to the immediacy of sense again?

The second essay deals shortly with Association. Contact association explains nothing, association by similars appears to do so, but, as the author continues, in any case the supremacy of association psychology is shaken. This chapter, however, makes a contribution to psychology by presenting in a lucid manner a number of cases which can only be described here as illustrating what might be called the spontaneous periodicity of mental life.

The last essay gives an account, partly historical, partly logical, of the development of the notions which have from time to time been current as to the relations of body and mind. The author shows how physiological work has contributed to the doctrine of parallelism, and insists, rightly enough, that two series of parallel events cannot explain each other. His demand for explanations indeed frequently involves an answer to the question "Why?" which is not forthcoming; and, doubtless, as he says, some of our explanations are really postulates.

W. H. WINCH.

Helen Keller: die Entwicklung und Erziehung einer Taubstummblinden. Von L. WILLIAM STERN. Berlin: Reuther & Reichard, 1905. Pp. 76.

This study contains a brief account of Helen Keller from the *Story of my Life;* the data that are of value for psychology, for the education of deaf-mutes, and for the theory of Language are selected and arranged in a useful way, and within each of these fields the many morals of this

extraordinary life are drawn. For Psychology we have the evidence it gives of inherited mental dispositions (not ideas or mental contents), which however require sense-impressions to bring them into actuality, and which, in the absence of these, fall into decay: the subordination of the qualitative values of impressions to their symbolic and practical values: the evidence that the function of a language-centre can be taken over by other parts of the brain than the Broca convolution, etc. The progress of Miss Keller in speech from seven years of age is put side by side with that of a normal maiden of one year onwards: the stages of the former, under Miss Sullivan's nature-method, are shown to be precisely analogous to those of the latter. The great value of Miss Keller's case for the study of language is pointed out, for example, in regard to the origin of abstract terms. Educationally the chief conclusions drawn are that the finger-alphabet system is that which gives the best results in the education of deaf-mutes, and that this should be employed in the natural way, *viz.*, by talking to the young deaf-mutes as one speaks to normal children—leaving them to *select* their words—rather than by building up from the elements (letters) to words and sentences, etc.

J. L. M.

Esame Critico delle XL. Proposizioni Rosminiane condannate dalla S. R. U. Inquisizione: Studi Filosofico-teologici di un Laico. Di GIUSEPPE MORANDO. Milano, 1905. Pp. cxxxvii, 993.

Prof. Morando is a fervent Rosminian. Rosmini's reputation as a philosopher outside Italy perhaps equals that of our own Bishop Butler on the continent. Inside Italy it prevails chiefly, I believe, to the north of the Apennines. His metaphysics do not appeal to the men of science. Positivists and Kantians will have none of him; neither will the Hegelians, if any of that school still survive. There remain the spiritualists, to whom a Catholic and patriotic thinker should be welcome. But, even among this scanty band, those who value their reputation for orthodoxy may feel shy about studying a philosophy condemned for its heretical tendencies by the Holy Office. It will, therefore, be readily understood how anxious such a disciple as Prof. Morando must be to clear his master's memory from this ruinous charge. I say ruinous, for if good Catholics do not study Rosmini, assuredly no one else will.

The charge which this bulky volume has been written to rebut is not new. From his first appearance as a philosopher Rosmini attracted the wrath of the Jesuits, but was shielded from their attacks by the favour of two successive Popes. At length it seemed as if the question would be set at rest. A number of propositions extracted from his works were submitted for examination in 1850 to the Congregation of the Index, presided over in its last sitting by Pius IX. in person. Four years of minute and careful examination resulted in an honourable acquittal, accompanied by a high encomium from the Pontiff himself. It was also decreed that no further accusations should be brought and that the whole controversy should cease. But the matter was not ended. According to our author, when the Jesuits have advanced a calumny they never withdraw it. In this instance their audacity went the length of pretending that Rosmini had after all not been acquitted. The sentence '*dimittantur*,' according to their interpretation, amounted to no more than a verdict of 'not proven,' a shelving of the charges until some more convenient opportunity should turn up. Still, the case looked very like a '*res judicata*,' and could not decently be reopened until a new fact was forthcoming. Unfortunately it was supplied by the publication

of Rosmini's posthumous works. Here, they said, the latent heresies which had passed undetected at the first trial were brought out with damning clearness. Meanwhile Pius IX. died and was succeeded by Leo XIII., who, as Cardinal Pecci, was known to have expressed himself unfavourably towards Rosmini. The indefatigable Jesuits were not slow to profit by the opportunity. A new investigation was ordered, and the 7th of March, 1888, saw the promulgation of a decree, approved by the Pope, in which the Holy Office condemns forty propositions extracted from Rosmini's works. If the Inquisition is right, the philosopher went wrong on nearly every point of natural and revealed religion. He taught pantheism; he denied the creation; he was unsound about the soul's immortality; he committed himself to most erroneous opinions about the Trinity, the Incarnation, the Fall, and the Sacraments.

The object of Prof. Morando's monumental work is to dispute on every point this fatal decision. He impeaches the justice and expediency of the second trial, whereby one papal decree has practically been reversed by another. He denies the alleged 'new fact,' on the ground that, as touching the points in question, Rosmini's posthumous works add nothing to the expositions published during his lifetime, and are even less explicit. Writing for a Catholic public, he also argues at some length, and in my opinion—if that is worth anything—correctly, that the condemnation, although ratified by Leo XIII., does not carry the weight of an infallible judgment. Pantheism and the other doctrines charged on Rosmini are, no doubt, from an orthodox point of view, detestable errors. But in point of fact he did not teach them. As to the general competence of the Roman Inquisition, Galileo's condemnation still hangs like a millstone about its neck. Various attempts have been made to free the parties concerned, Jesuits, Congregation, and Pope, from that terrible responsibility, and downright falsehoods have not been spared; but the result has been to rivet it more securely. Not only was scientific truth declared contrary to reason, but contrary to Scripture as well, thus transferring the question from astronomy to theology. And when Galileo pointed out that the words of Scripture, being adapted to popular comprehension, did not really exclude the earth's motion, he showed himself a much better theologian than his persecutors, for this is exactly what the Church now teaches. In this connexion Prof. Morando relates an almost incredible perversion of the truth on the part of two saintly personages. One of them, D. Giovanni Bosco, founder of the Salesian Order, has the effrontery to state in a history of Italy, intended for the use of young people and widely circulated among them, that 'Galileo, wishing his system to receive the approval of the Church, asked the Pope and the Inquisition to declare that it was founded on the Bible. He was, however, disappointed, the judgment given being that the Copernican system could not with certainty be declared conformable to Scripture, accompanied by a caution not to mix up his private opinions—which for the rest were left quite free—with the certain truths of Holy Writ.' And the other holy man, a certain P. Giuseppe Faà di Bruno, by whose missionary activity England it seems benefited for thirty years, repeats the same monstrous fiction in a book called *Catholic Belief* (pp. lxxiv. *sq.*).

All this, however, merely serves to clear the ground. Prof. Morando devotes the bulk of his work to a minute dissection of the charges against Rosmini's orthodoxy, with the result in each instance of showing, to his own satisfaction, that the philosopher has been misunderstood. I cannot follow him here. A bare enumeration of the forty incriminated propositions would greatly exceed the limits of a short notice; and, in any case, for a Protestant layman to meddle with the subtleties of scholastic philosophy would be the height of rashness. I will only observe that the

grave imputation of pantheism, sufficiently improbable in itself, seems to be very successfully repelled. One hopes that such vast learning, industry, and acuteness as are here displayed may, in some way or other, contribute to the confusion of prejudice and the spread of truth.

On the subject of Greek philosophy, I may, perhaps, be allowed to rectify some errors into which our apologist has fallen through trusting second-hand information. Plato is here quoted as saying that 'deep down in man's nature there is a fatal impulse . . . caused by ancient unexpiated crimes' (p. 687); and this is taken as confirming the dogma of original sin. But in the passage referred to (*Laws*, bk. ix., 854 B), Plato is not talking about human nature in general; on the contrary he is addressing a sacrilegious robber and assuming that the impulse moving him to commit such a horrid crime is no ordinary human malady, but 'madness begotten in a man from ancient and unexpiated crimes of his race'—*i.e.*, his particular race, such as that of Tantalus or Laius. Nor is it true, as here stated, that the ancient philosophers set forth the fact of human corruption more clearly after than before Christ. The passage quoted from Plutarch in proof of this is peculiarly unfortunate ('Moralia,' 104 D), for, in the first place, it only says that every one has his faults and misfortunes; and, in the second place, it is quoted by Plutarch from Crantor, who flourished about 300 B.C. I would also observe that, if ever any philosopher said, 'only one of my pupils understands me—and he doesn't'; it certainly was *not* Hegel (p. cxxviii.).

ALFRED W. BENN.

Le Finzioni dell' Anima. By GIOVANNI MARCHESINI. Bari: Laterza and Figli, 1905. Pp. 299.

The writer of this book has in two earlier publications essayed the task of estimating the value of thought and of personality "in the dynamism of Nature". Here he adds the coping-stone, and sets himself the task of giving a psychological and logical analysis of the ideal 'fictions' which the human soul weaves for itself in the sphere of knowledge and of morality.

His practical purpose is to establish on the basis of clear psychological facts a norm of pedagogical ethics.

What, then, are the 'fictions' of the soul? Fictions were defined by Lotze as assumptions which are accompanied by a consciousness of their objective unreality. But the mind in much of its activity tends to attribute objective reality to its own creations. To this tendency our author gives the name of "finzione". The 'fictions' which it weaves are not to be classed with illusions—whether these are due to the accident of individual experience or to the work of constructive imagination. Illusion is "a deviation of individual experience from human experience" (Sully), and is a particular and transitory fact. "Finzione" on the other hand is "a deviation of the self from the self" (p. 8), and is a general fact, a common power of the mind by which it contemplates the idealisation of itself. It is an activity of consciousness by which we give substance to shadow by projecting on the real world a product of the imagination. It is that inner artifice by which we give the form of objective truth to beliefs which are due to the disposition and needs of the soul itself.

"There is no aspect or element of psychical reality" which is absolutely outside the scope or dominion of this 'Fiction'. There are 'fictions' of sentiment, of knowledge, and of will. There are 'fictions' which lead to science, and 'fictions' which lead to morality. The tendency to create

these fictions is a normal mode of the life of the spirit both in the intellectual and the moral sphere. Social life is an essential co-efficient of this form of spiritual activity just as the exterior world is an essential co-efficient of vision. Education is the socialisation or moralisation of the individual. It is largely by means of these 'fictions' that this is effected. The 'fictions' of absolute perfection of goodness, and happiness, of the absoluteness of duty and responsibility may be utilised to promote moral education. "Pedagogical Ethics is the hygiene of the soul, and its first principle is the economic utilisation of psychical energy" (p. 294). With this form of psychical energy to hand, our author proposes to use it for the social and moral education of the young. He would use the tendency to weave fictions, just as Froebel used the tendency to play games. The life of the home, the school, the community, the State is ever suggesting ideals, and these are moulding the lives of the young. These ideals are 'fictions' which their minds cannot help making in a greater or less degree of intensity.

The maxim or norm which this book lays down as the basis of a "rational pragmatism," and of ethical education may be thus expressed:— "Act as if that which is true socially, and is socially imposed as absolute, were true and absolute also for you".

Character, our author might have said, is ideotropic. Ideals tend to realise themselves in us. Our ideals may be partly the expression of our personality and partly reflexions of our social and spiritual environment, but they guide our character in its growth.

The main argument of this book has been anticipated by Fouillée, Guyau and others. Dr. Stout in his introduction to the translation of *Education and Heredity* uses words that admirably sum it all up: "Ideas tend by their very nature to act themselves out. . . . Now the representation of an ideal self may be made the most pervasive and persistent of ideas, and may thus become the dominant principle of conduct. To effect this is the aim of ethical education."

The volume contains much clear analysis, and a suggestive exposition of its thesis.

JOHN EDGAR.

L'Indeterminismo nella Filosofia Francesa contemporanea: La Filosofia della Contingenza. ADOLFO LEVI. Firenze: B. Seeber, 1905. Pp. x, 300.

This volume forms an admirable introduction to the history of recent philosophical thought in France. It is the first part of a work the subsequent portion of which will embrace the *Philosophie nouvelle*—the Humanism of France. In intention it is a criticism of the whole movement, and a refutation of its principles, but the author has fortunately separated the critical section (pp. 219-300) from the much longer historical and expository sections. The Introduction (pp. 3-75) traces the beginnings of the French reaction in the middle of last century against Positivism on the one hand and the watery Idealism of Cousin on the other, and outlines the theories of Secrétan, Renouvier and Ravaisson—the philosophies of Liberty—so far as they bear upon the question of determinism and indeterminism. Émile Boutroux follows as the pupil of Ravaisson, marking the transition from the earlier metaphysical doctrine of Liberty to the more recent critical theory of Contingency (*Contingentismo*). The "contingentists," with whom the present volume is mainly concerned, are divided into two classes, to each of which a book is devoted. In the first class (book i.) fall those who have arrived at the theory from a literary or purely philosophical point of view—Bergson, the Belgian Remacle, and Jean Weber: in the second class (book ii.)

those who have approached the question from the standpoint of science or methodology—Milhaud, Tannery, Poincaré. Although coinciding in their negative conclusions—the denial of the unconditional validity of natural laws, and the consequent denial of determinism within human life—the two schools are shown to be radically divergent in their positive assumptions, and their point of view. The former represents a reaction against positivism on the side of its pure *determinism*, advancing the claim of the Self as a whole, as the "*ensemble* of its thoughts, sentiments, aspirations,"—the "deeper self" of Bergson—against the "superficial" self, *i.e.* the conscious, rational, logical subject. It is therefore anti-intellectualist in tendency, and its natural development is the *Philosophie nouvelle* of which Bergson's later work (*Matière et Mémoire*) forms the most complete statement. The other school attacks the *empirical* side of Positivism, which is, in fact, according to Levi, inconsistent with its determinism, since no summation of experience could ever give absolute certainty to an objective law. With them reason in its free activity is supreme: they unite with Hume in regarding mathematics as the type of certain knowledge—certain because the science depends wholly upon its definitions, which are freely determined by reason. They are therefore rationalist, intellectualist, in their tendency.

The critical part of the work develops the inconsistencies of these different points of view, and finds that both alike lead to "profoundly negative" results—scepticism and theoretical a-moralism. The movement is too young for this confident judgment: but the work may be recommended as a fair presentment, within moderate compass, of a system (or systems) which is still largely buried in pamphlets and journals.

J. Lewis McIntyre.

Received also:—

Henry Sidgwick, *Lectures on the Philosophy of Kant, and Other Philosophical Lectures and Essays*, London, 1905, Macmillan, pp. vii, 475.

David G. Ritchie, *Philosophical Studies*, edited with a Memoir by Robert Latta, M.A., D.Phil., London, Macmillan, 1905, pp. vi, 355.

George Santayana, *The Life of Reason, or Phases of Human Progress*, London, Constable, 1905, 2 vols., pp. 291 and 205.

John Rowland Angell, *Psychology, an Introductory Study of the Structure and Function of Human Consciousness*, second edition revised, London, Constable, 1905, pp. 402.

Alfred Cook, *Psychology, an Account of the Principal Mental Phenomena, with Numerous Examples, an exposition in popular form*, New York, Hinds, Noble & Eldridge; London, A. Owen & Co., no date, pp. 386.

Nathanial Southgate Shaler, *The Citizen, a Study of the Individual and the Government*, London, Constable, 1905, pp. viii, 346.

Achille Marucci, *La nuova Filosofia del Diritto Criminale*, Con Prefazione del Barone R. Garofalo, Roma, E. Loescher & C., 1904, pp. 325.

H. Liepman, *Über Störungen des Handelns bei Gehirnkranken*, Berlin, S. Karger, 1905, pp. 161.

Giorgio del Vecchio, *I Presupposti Filosofici della Nozione del Diritto*, Bologna, Nicola Zanichelli, 1905, pp. 192.

Cosmo Guastella, *Saggi sulla Teoria della Conoscenza, Saggio Secondo, Filosofia della Metafisica*, Palermo, Remo Sandron, 1905, 2 vols., pp. 762 and 470, ccxxv, 343.

Julius Schultz, *Die Bilder von der Materie, eine psychologische Untersuchung über die Grundlagen der Physik*, Göttingen, Vandenhoeck & Ruprecht, 1905, pp. 201.

Wilh. Jerusalem, *Der kritische Idealismus und die reine Logik, ein Ruf im Streite* Wien und Leipzig, Wilh. Braumüller, 1905, pp. 226.

Wilh. Jerusalem, *Gedanken und Denker, Gesammelte Aufsätze*, Wien und Leipzig, Wilh. Braumüller, 1905, pp. 292.

L'année psychologique, publiée par Alfred Binet, Onzième année, Paris, Masson & Cie., 1905, pp. 693.

Wolfgang Schultz, *Studien zur antiken Kultur, Pythagoras und Heraklit*, Leipzig und Wien, Akademischer Verlag, 1905, pp. 118.

Bertrando Spaventa, *Da Socrate a Hegel, Nuovi Saggi di Critica Filosofica, a cura di Giovanni Gentile*, Bari, Laterza & Figli, pp. xvi, 432.

Manfredi Porena, *Che cos'è il bello? Schema d'un'estetica psicologica*, Milano, Ulrico Hoepli, 1905, pp. vii, 483.

Northcote W. Thomas, *Crystal Gazing, Its History and Practice, with a Discussion of the Evidence for Telepathic Scrying*, with an Introduction by Andrew Lang, M.A., LL.D., London, De la More Press, 1905, pp. 162.

Northcote W. Thomas, *Thought Transference, a Critical and Historical Review of the Evidence for Telepathy, with a Record of New Experiments*, London, De la More Press, 1905, pp. 214.

Alfred Biese, *The Development of the Feeling for Nature in the Middle Ages and Modern Times*, London, Routledge, 1905, pp. 376.

Aug. Wünsche, *Der Sagenkreis vom geprellten Teufel*, Leipzig und Wien, Akademischer Verlag, pp. 128.

N. R. D'Alfonso, *Lo Spiritismo secondo Shakespeare*, Roma, E. Loescher & C., 1905, pp. 46.

Hon. James Bryce, *Address on the Aims and Programme of the Sociological Society, with First Annual Report and List of Members*, Westminster, the Sociological Society, 1905, pp. 47.

Wilh. Jerusalem, *Die Aufgaben des Mittelschullehrers, ein Vortrag*, Wien und Leipzig, Wilh. Braumüller, 1903, pp. 64.

Giorgio del Vecchio, *La Dichiarazione dei Diritti dell'uomo e del Cittadino nella Rivoluzione Francese*, Genova, Tipografia della Gioventu, 1903, pp. 93.

Hans von Hollenhaag, *Vom Typus in der Kunst, Proben*, Leipzig und Wien, Akad. Verlag, 1905, pp. 82.

Ernesto Quesada, *La Sociología, Carácter Científico de su Enseñanza*, Buenos Aires, J. Menéndez, 1905, pp. 43.

F. W. Frankland, *Thoughts on Ultimate Problems, being a Synoptic Statement of Two Theodicies*, second and revised edition, Wellington, 1905, pp. 22.

N. Vaschide, *Index Philosophique, Philosophie et Sciences, Publication annuelle de la Revue de Philosophie*, Deuxième année, Paris, Chevalier & Rivière, 1905, pp. 464.

Giuseppe Mantovani, *Psicologia Fisiologica*, seconda edizione riveduta, Milano, Ulrico Hoepli, 1905, pp. 175.

Anton Palme, *J. G. Sulzers Psychologie und die Anfänge der Dreivermögenslehre*, Berlin, W. Fussinger, 1905, pp. 62.

Mary Whitton Calkins, *Der Doppelte Standpunkt in der Psychologie*, Leipzig, Veit & Comp., 1905, pp. 80.

E. E. Constance Jones, *A Primer of Logic*, London, John Murray, 1905, pp. 188.

C. Sentroul, *L'objet de la Métaphysique selon Kant et selon Aristote*, Louvain, Institut supérieur de la philosophie, 1905, pp. xii, 240.

F. M. Davenport, *Primitive Traits in Religious Revivals*, London, Macmillan, 1905, pp. 323.

Dr. Otto Siebert, *Ein kurzer Abriss der Geschichte der Philosophie im Anschluss an Rudolf Hayms philosophische Vorlesungen*, Langensalza, Beyer & Söhne, 1905, pp. ix, 318.

VII.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xiv., No. 1. **H. R. Marshall.** 'The Relations of Æsthetics to Psychology and Philosophy.' [The essence of beauty is to be found in pleasure, and the differentia of æsthetic pleasure is its relative permanency. Æsthetics demands from philosophy an account of the genesis of art, and also a rationalised scheme of the relations of the beautiful, within the real, to the true and the good.] **M. F. Washburn.** 'Wundtian Feeling-Analysis and the Genetic Significance of Feeling.' [There are transitional forms of mental process between sensation and affection. To this borderland belong the Wundtian feelings of excitement and depression, strain and relaxation. They are processes within the zone of possible, but without that of inevitable introspective analysis.] **W. P. Montague.** 'A Neglected Point in Hume's Philosophy.' [Hume was inconsistent in regarding the belief in the independent existence of sensible objects as a fiction.] **H. W. Wright.** 'Natural Selection and Self-conscious Development.' [There are both physical and teleological factors in evolution, and as the process continues the teleological factor becomes more influential.] Reviews of Books. Summaries of Articles. Notices of New Books. Notes. Vol. xiv., No. 2. **G. T. Ladd.** 'The Mission of Philosophy.' [The mission is "to bring science, morality, religion and art, into each other's more intimate presence, to bid them keep peace with one another by showing them that they are all parts of one great truth, all manifestations of that unity of spirit which, amid all strifes and destructions of particular realities, abides as the true life of the world, both of things and of selves".] **B. Erdmann.** 'The Content and Validity of the Causal Law,—i.' **H. N. Gardiner.** '*Proceedings of the Fourth Meeting of the American Philosophical Association*, University of Pennsylvania, Philadelphia, December 28, 29 and 30, 1904.' **W. H. Sheldon.** 'The Metaphysical Status of Universals.' [A universal may justly be defined as any concrete fact of experience with a suggestive or transitive quality, and not as a permanent substantive entity.] Reviews of Books. Summaries of Articles. Notices of New Books. Notes.

Psychological Review. Vol. xii., No. 1. **W. James.** 'The Experience of Activity.' [Psychologically, experiences of activity are real and obvious. In speaking of 'my' activity, I may, however, interpret by saying that a wider thinker is active, or that certain ideas are active, or that certain brain cells are active. The three hypotheses must be put to the pragmatic test. Metaphysically, real effectual causation as an ultimate nature, as a category of reality, is just what we feel it to be, just that kind of conjunction which our own activity-series reveal.] **T. H. Haines** and **J. C. Williams.** 'The Relation of Perceptive and Revived Mental Material as shown by the Subjective Control of Visual After-Images.' [Comparison of the course of after-images, memory images, and after-

images 'controlled' by a memory image. The difference between perceived and revived contents is largely a matter of 'organisation' or vividness.] **G. M. Stratton.** 'Studies from the University of California Psychological Laboratory.' **J. E. Brand.** 'The Effect of Verbal Suggestion on the Estimation of Linear Magnitudes.' [Suggestion, though formal and arbitrary, has an appreciable effect, varying with individuals and circumstances.] **G. S. Manchester.** 'Experiments upon the Unreflective Ideas of Men and Women.' ["The surface ideas of men are extensive rather than intensive, while the opposite is true of women."] Vol. xii., Nos. 2, 3. **H. Hoeffding.** 'The Present State of Psychology and its Relations to the Neighbouring Sciences.' [There is a conflict in psychology between atomism and dogmatism, analysis and synthesis, intellectualism and voluntarism. Rightly interpreted, voluntarism is the better position, and may to-day be regarded as the main point of view in psychology. Over against physical science, psychology is synthetic; over against history and ethics, analytic.] **C. L. Morgan.** 'Comparative and Genetic Psychology.' [Discusses the transition from biological responses and reactions to conscious behaviour founded on experience, and the later transition from perceptual to ideational process.] **P. Janet.** 'Mental Pathology.' [Comparison of fatigue, sleep, dreams, emotion with the abnormal psychoses of hysteria, psychæsthenia, melancholia; statement of problems.] **M. Prince.** 'Some of the Present Problems of Abnormal Psychology.' [(1) The problems of functional dissociation, abnormal syntheses and automatisms are fundamental to abnormal, and therefore also to normal psychology. (2) As regards the range of sub-conscious states, "while a greater or less number of isolated dissociated states are constantly occurring under normal conditions, there is no satisfactory evidence that they normally become synthesised among themselves and exhibit automatism excepting in states of abstraction and as artifacts".] **J. M. Baldwin.** 'Sketch of the History of Psychology.' [Greek psychology; the dualistic transition; nineteenth century naturalism and positivism; prospects. The psychology of the future will be social; intertwined with physics and biology; genetic; and racial and comparative.] **A. E. Davies.** 'An Analysis of Elementary Psychic Process.' [Most elementary are feeling processes which are not contents but intents of consciousness. These eventuate in physiological changes which are both the objective side of feeling and also practical attitudes, through which kinæsthetic sense material becomes functional. As the data of sense grow complicated, they are organised into perceptions by 'suggestion' operating under the guidance of feeling.]

American Journal of Psychology. Vol. xvi., No. 1. **J. R. Jewell.** 'The Psychology of Dreams.' [An inquiry based upon questionary returns, which makes no contribution to the psychology of dreaming, but touches upon some interesting points, *e.g.*, the inhibiting of dreams by suggestion, the confusion of dream events with real occurrences, the influence of the dream-life upon waking conduct, etc.] **L. J. Martin.** 'The Psychology of Æsthetics: (1.) Experimental Prospecting in the Field of the Comic.' [Records of undirected introspection; of experiments made with the view of finding out whether the psychophysical metric methods, or similar experimental procedures, can be employed in the study of the comic; and of introspection directed by means of a questionary. The experiments were more successful than one might have anticipated. The paper should have been summarised.] **A. F. Chamberlain.** 'Primitive Hearing and Hearing-Words.' **E. J. Swift.** 'Memory of a Complex Skilful Act.' [Practice with one-handed throwing and catching of two balls, resumed after twenty-one months' interval.

The nervous system had forgotten little or nothing; lack of skill in the early tests was chiefly muscular.] Literature. Notes. Vol. xvi., No. 2. **L. M. Terman.** 'A Study in Precocity and Prematuration.' [Discusses the meaning of infancy; education and prematuration; over-pressure; criminal, religious, sexual precocity; the relations of precocity to unbalance and to nervousness.] **E. Montgomery.** 'Anent Psychophysical Parallelism.' [Conscious content, which is all-revealing but utterly forceless and phenomenal, can be fully understood only as signalising real modes of existence beyond itself, as a functional outcome of the vital organisation of our real, extra-conscious, power-endowed being.] **E. Conradi.** 'Song and Call-notes of English Sparrows when Reared by Canaries.' [Sparrow chicks in nine months adopted the canary's call-note and part of the canary's song; then, under sparrow influence, dropped back into their natural ways; and then again, under renewed instruction, quickly regained what they had lost.] **W. B. Pillsbury.** 'Studies from the Psychological Laboratory of the University of Michigan.' **B. Barnes.** (IX.) 'Eye Movement.' [There is a contradiction between Donders' and Listing's laws. Donders' law holds; but there is always torsion with rotation, in amount proportional to the amount of rotation.] **E. B. Titchener.** 'The Problems of Experimental Psychology.' [Review of current problems, under the heads of sensation, affection, attention; perception; recognition, memory, association; action, imagination, complex affective formations, higher intellectual processes; consciousness. Relation of experimental psychology to animal and child psychology and to mental pathology.] **G. C. Ferrari.** 'Experimental Psychology in Italy.' [Criticism and correction of the paper by G. Chiabra, October, 1904.] **C. Spearman.** 'Proof and Disproof of Correlation.' [Reply to Whipple.] **R. Macdougall.** 'The Significance of the Human Hand in the Evolution of Mind.' Literature. Book Notes.

REVUE DE PHILOSOPHIE. 1er Avril, 1905. The two articles of interest, and they are complementary to one another, are **Émile Boutroux's** 'Life and Works of Leo Ollé-Laprune,' and a sympathetic review, with analysis, of **Mr. Schiller's** *Humanism*. Other articles are **P. Duhem's** 'Physical Theory, Consequences Relating to the Teaching of Physics'; **Alfredo Niceforo's** 'Economic Influences on the Variations of Human Stature'; **N. Vaschide's** 'Experimental Researches on Intellectual Fatigue'; **Louis-Germain Lévy's** Thesis at the Sorbonne: (1) 'Metaphysics of Maimonides; (2) The Family in Hebrew Antiquity'. 1er Mai. **X. Moisant.** 'God in the Philosophy of M. Bergson.' [An argument of the Eternal from the consciousness of Duration.] **P. Duhem.** 'Physical Theory, the Choice of Hypotheses.' [How gravitation was gradually discovered.] **E. Peillaube.** 'Images of Muscular Movement in the Imagination' (other than visual). **L. Gockler.** Thesis for Sorbonne Doctorate: 'The Pedagogy of Herbart'. 1er Juin, 1905. **P. Duhem.** 'Physical Theory,' Article xiii. (and last), 'The Choice of Hypotheses'. [The way to teach any hypothesis in physics is the historical method, showing how in course of time this hypothesis came to be formed.] **G. Vailati.** 'Distinction between Knowledge and Will.' **F. Mentre.** 'The Problem of Genius, on Occasion of a Recent Book.' [The book is *Du rôle de l'individu dans le déterminisme sociale*, by **M. Draghicesco,** whose thesis is that geniuses stand in the way of the orderly development of society, and that "only when the last great man shall be laid out in his winding-sheet of purple shall the era of social legislation set in".] **A. Niceforo.** 'Economic Influences on Human Stature.' Review of **A. Sertillange's** *Les sources de la croyance en Dieu.* 1er Juillet, 1905. **C. Dessoulavay.** 'Pragmatism.' [Favourable, but on page 117 a criticism.] **A. de**

Lapparent. 'Foundations of Mechanics.' **V. Motora.** 'Essay on Oriental Philosophy.' ['The idea of the ego.'] **Vurgey.** 'Glimpses of Æsthetics.' Review of a pædagogic treatise, *School Friendships*, by **G. Obici** and **G. Marchesini** (Rome: Albrighi, 1905, third edition).

Revue de Métaphysique et de Morale. 13e année. No. 3, May, 1905. This enlarged number is devoted to the memory of Antoine Augustin Cournot, whose works are shortly to be republished. An excellent portrait is prefixed. Those to whom Cournot is an unfamiliar name will find an interesting account of his life and work in the biographical article by **H. L. Moore.** According to Moore it is doubtful whether "qu'il y ait, dans l'histoire de la science française au xixe siècle, un autre savant dont l'œuvre égale la sienne par l'étendue, la profondeur, et les résultats durables". Tarde, the sociologist, in dedicating a book to Cournot's memory has acclaimed him as "Ce Sainte-Beuve de la critique philosophique, ce géomètre profond, ce logicien hors ligne, cet économiste hors cadre, précurseur méconnu des économistes nouveaux". Cournot's work in these various departments is considered in the following articles: **H. Poincaré.** 'Cournot et les principes du calcul infinitésimal.' **G. Milhaud.** 'Note sur "la raison chez Cournot".' **G. Tarde.** 'L'accident et le rationnel en histoire d'après Cournot.' **C. Bouglé.** 'Les rapports de l'histoire et de la science sociale d'après Cournot.' **A. Aupetit.** 'L'œuvre économique de Cournot.' **F. Faure.** 'Les idées de Cournot sur la statistique.' **A. Darlu.** 'Quelques vues de Cournot sur la politique.' **F. Vial.** 'Cournot et l'enseignement.' **D. Parodi.** 'Le criticisme de Cournot.' **F. Mentré.** 'Les racines historiques du probabilisme rationnel de Cournot.' **R. Audierne.** 'La classification des connaissances dans Comte et dans Cournot.'

Revue Philosophique de la France et de l'Étranger. 30ième année. No. 4, Avril, 1905. **Adrien Naville.** 'La primauté logique des jugements conditionnels.' **Jules Martin.** 'L'institution sociale (1er article).' **Dr. Champeaux.** 'Essai de sociologie microbienne et cellulaire.' **J. Pérès.** 'Réalisme et idéalisme dans l'art.' Revue critique. **A. Hannequin.** 'Les philosophies médiévales d'après M. Picavet.' Analyses et comptes rendus. Revue des périodiques étrangers. No. 5, Mai. **Fr. Paulhan.** 'La moralité indirecte de l'art.' **J. Maldidier.** 'Les "Réducteurs antagonistes" de Taine.' **Abbé Jules Martin.** 'L'institution sociale (2e et dernier article).' Revue générale. **J. Segond.** 'Quelques publications récentes sur la morale.' Analyses et comptes rendus. Revue des périodiques étrangers. No. 6, Juin. **F. le Dantec.** 'La méthode pathologique.' **Dr. G. Dumas.** 'Pathologie du sourire (avec figures).' **F. Lannes.** 'Le mouvement philosophique en Russie: les Slavophiles.' **J. Novicow.** 'Erreur et malheur.' Analyses et comptes rendus. Revue des Périodiques étrangers. Table des matières. No. 7, Juillet. **Vte. Brenier de Montmorand.** 'Les états mystiques.' **A. Schinz.** 'La question d'une langue internationale artificielle.' **F. le Dantec.** 'La méthode pathologique (2e et dernier article).' **G. Rageot.** 'Le Ve Congrès international de psychologie.' Analyses et comptes rendus. Notices bibliographiques. Périodiques étrangers. No. 8, Août. **René Worms.** 'La philosophie sociale de G. Tarde.' **A. Schinz.** 'La question d'une langue internationale artificielle (2e et dernier article).' **P. Lacombe.** 'La psychologie de Taine appliquée a l'histoire litteraire.' Analyses et comptes rendus. Revue des Périodiques étrangers. Correspondance—Lettres de MM. H. Bergson et G. Rageot. Nécrologie.—A. Hannequin.

Archives de Psychologie. Tome iii., No. 4. **A. Pictet.** 'Observations sur le sommeil chez les insectes.' [Decides, after reviewing some facts of seasonal and daily sleep, that the nature of insect sleep is instinctive.] **T. Flournoy.** 'Chorégraphie somnambulique: le cas de Magdeleine G.' [Review, with personal observations and illustrations, of the work of Schrenck-Notzing and Schultze: *Die Traumtänzerin Magdeleine G.*] **J. Reinke.** 'Néovitalisme et rôle de la finalité en biologie.' [Mechanism and teleology are equally legitimate as working hypotheses, and teleology may be something more.] **S. De Sanctis.** 'Le problème de la conscience dans la psychologie moderne.' [Discusses the objective criteria of mind, the existence of psychical centres, etc.] Recueil de faits: Documents et Discussions. **A. Lemaitre.** 'Un test basé sur la modification de l'écriture.' **E. Claparède.** 'Remarque sur le grossissement provoqué de l'écriture.' **V. Ghidionsecu.** '1er Congrès International d'Hygiène Scolaire, Nuremberg, 4-9 Avril, 1904.' Bibliographie. Notes diverses. Tome iv., No. 1. **A. Lemaitre.** 'Observations sur le langage intérieur des enfants.' [Children of thirteen or fourteen present endophasic types of great variety, and of a higher degree of complexity than is found in the adult.] **L. Schnyder.** 'L'examen de la suggestibilité chez les nerveux.' **T. Flournoy.** 'Note sur un songe prophétique réalisé.' Recueil de faits: Documents et Discussions. **J. Vrey.** 'Essai sur l'amour.' **A. Binet.** 'Note sur le grossissement provoqué de l'écriture.' **Zbinden.** 'De l'appréciation du temps chez les neurasthéniques.' **A. Lemaitre.** 'Un accident mortel imputable à l'autoscopie.' **C. A. Laisant** et **H. Fehr.** 'Enquête sur la méthode de travail des mathématiciens.' Bibliographie. Notes diverses. Tome iv., No. 2. **M. C. Schuyten.** 'Comment doit-on mesurer la fatigue des écoliers?' [Letter copying, dynamometric and æsthesiometric tests. The last mentioned was the most satisfactory.] **T. Flournoy.** 'Sur le panpsychisme comme explication des rapports de l'âme et du corps.' [Panpsychism has great epistemological and metaphysical value, but has no explaining power on the scientific level.] **C. A. Strong.** 'Quelques considérations sur le panpsychisme.' **A. Leclère.** 'La genèse de l'émotion esthétique.' ["La beauté n'est autre chose que le nom élogieux donné par l'homme à la cause réelle ou fictive du plaisir spécial qui détermine en lui la pensée pure de la joie; elle est l'appellation inventée par lui pour féliciter tout objet qui cause en lui ce plaisir."] **G. Sergi.** 'Les illusions des psychologues.' [Discussion of the terms will and consciousness.] Recueil de faits: Documents et Discussions. **E. Claparède.** 'Stéréoscopie monoculaire paradoxale.' **A. Lemaitre.** 'Suicide par intoxication philosophique.' **T. Flournoy.** 'A propos d'un songe prophétique réalisé.' Bibliographie. Notes diverses.

Zeitschrift für Psychologie und Physiologie der Sinnesorgane. Bd. xxxvii., Heft 1 und 2. **W. Trendelenburg.** 'Quantitative Untersuchungen über die Bleichung des Sehpurpurs in monochromatischem Licht.' **P. Ephrussi.** 'Experimentelle Beiträge zur Lehre vom Gedächtniss,—i.' [Experiments on the economy of learning with material presented pair-wise. General results: (1) in the case of nonsense syllables, reading with cumulative repetitions is, in general, far more economical than learning by wholes; (2) with numbers, or with pairs made up of word and number, on the other hand, learning by wholes yields the better result.] **G. Busck.** 'Ueber farbige Lichtfilter: einige photometrische Untersuchungen.' [Spectroscopic tests of twelve liquid filters.] Besprechungen. [Skutsch on Wundt's Die Sprache; Runze on James's Religious Experience.] Literaturbericht.

ARCHIV FÜR DIE GESAMMTE PSYCHOLOGIE. Bd. iv., Heft 1 und 2. **E. Ebert** und **E. Meumann.** 'Ueber einige Grundfragen der Psychologie der Uebungsphänomene im Bereiche des Gedächtnisses; zugleich ein Beitrag zur Psychologie der formalen Geistesbildung.' [Discusses the effect of onesidedly mechanical practice upon the general memory-function, and the various methods of economical learning. A further paper upon practical consequences is promised.] **M. Geiger.** 'Bemerkungen zur Psychologie der Gefühlselemente und Gefühlsverbindungen.' [A lengthy paper, based on Lipps' pluralism, and held exclusively upon the descriptive level.] Literaturbericht. **A. Vierkandt.** 'Jahresbericht über die Literatur zur Kultur- und Gesellschaftslehre aus dem Jahre 1903.' Bd. iv., Heft 3. **H. J. Watt.** 'Experimentelle Beiträge zu einer Theorie des Denkens.' [A valuable paper, whose results rest upon experiments on the associative reaction: especially rich in introspective facts.] Literaturbericht. Bd. iv., Heft 4. **K. Gordon.** 'Ueber das Gedächtniss für affektiv bestimmte Eindrücke.' **O. Kuelpe.** 'Bemerkungen zu vorstehender Abhandlung.' [Experiments with visual stimuli fell out negatively; nowhere "zeigte sich eine merkliche Differenz für angenehme, indifferente, und unangenehme Objekte". Kuelpe suggests cautions, and indicates possible theoretical conclusions.] **T. Lipps.** 'Weiteres zur Einfühlung.' [Illustration and definition, against Witasek and Kuelpe, in the light of the general law that "in jeder Vorstellung irgendeines Gegenstandes oder Sachverhaltes an sich die Tendenz liege, zum vollen Erleben desselben zu werden".] **R. H. Pedersen.** 'Experimentelle Untersuchung der visuellen und akustischen Erinnerungsbilder, angestellt an Schulkindern.' Literaturbericht. Zeitschriftenschau. Bd. v., Heft 1. **E. Meumann.** Untersuchungen über das Wesen des Gefühls mittels der Ausdrucksmethode. **M. Kelchner.** 'II. Die Abhängigkeit der Atem- und Pulsveränderung vom Reiz und vom Gefühl.' [A paper of varied contents. We have space only to note the following general results: (1) pulse rate is dependent upon the nature of the stimulus; pleasant tastes quicken, pleasant tones and colours slow the pulse; (2) respiration is independent of stimulus, and evinces well-marked differences in the mode of reaction of individual observers.] Referate. **W. Wirth.** 'Fortschritte auf dem Gebiete der Psychophysik der Licht- und Farbenempfindung, II.' **W. Peters.** 'Die Bewegungs- und Lageempfindungen, I.' Bd. v., Heft 2. **H. Hielscher.** 'Völker- und individuellpsychologische Untersuchungen über die ältere griechische Philosophie.' [Discussion of the function of psychology in the treatment of the beginnings of Greek philosophy, with special reference to Nietzsche. Analysis of the views of Thales, Anaximander, Anaximenes, Diogenes of Apollonia.] **V. Ghidionescu.** 'Der 2te internationale Kongress für Philosophie.' Literaturbericht. **W. Wirth.** 'Fortschritte auf dem Gebiete der Psychophysik der Licht- und Farbenempfindung, II. Fortsetzung.' Zeitschriftenschau.

KANT-STUDIEN. Bd. x., Heft 1-2. March, 1905. **G. Gerland.** 'Immanuel Kant, seine geographischen und anthropologischen Arbeiten.' [The first of a series of articles by a geographical expert upon Kant's work in this field.] **Franz Staudinger.** 'Der Gegenstand der Wahrnehmung.' [Kant, Staudinger maintains against Messer, confused the psychological and the critical points of view.] **Hugo Renner.** 'Der Begriff der sittlichen Erfahrung.' **Tim Klein.** 'Hamlet und der Melancholiker in Kant's *Beobachtungen über das Gefühl des Schönen und Erhabenen.*' [Points out the quite remarkable agreement between Kant's description of the melancholic temperament and the character of Hamlet.] **Bruno Bauch.**

'Eucken's philosophische Aufsätze.' **M. Ascher.** 'Renouvier und der französische Kritizismus.' **Ernst von Aster.** 'Der IV. Band der Berliner Kant-Ausgabe.' **H. Vaihinger.** 'Das Kantjubiläum im Jahre 1904.' **Franz Jünemann.** 'Kant's Tod, seine letzten Worte und sein Begräbnis. Eine synoptische Studie.' Recensionen.

Vierteljahrsschrift für Wissenschaftliche Philosophie und Soziologie. Jahrgang xxix., Heft 2. Mai, 1905. **Hugo Renner.** 'Absolute, kritische und relative Philosophie: einige Bemerkungen zu Rickerts Einleitung in die Transzendentalphilosophie.' [Rickert's so-called Transcendental Philosophy really an absolute epistemological metaphysic. His central concept "Bewusstsein überhaupt" is empty, a metaphysical translation of Kant's transcendental unity of self-consciousness. Renner himself finds in the explanation of the difference of direction between the objects of physics and those of psychology the fundamental problem of epistemological theory. Rickert's hypothesis which makes "ought" the object of knowledge a metaphysical interpretation of reality, but no explanation or foundation of the concept. The philosopher has to explain the positive sciences, not to deduce them.] **Gerhard Stosch.** 'Die Gliederung der Gesellschaft bei Schleiermacher: ein Beispiel der genetisch-konstruktiven Klassifikationsmethode.' [Schluss.] **W. Freytag.** 'Über die Erkenntnistheorie der Inder.' [A well-informed and interesting article on an unfamiliar subject. Defends the originality and variety of Indian philosophy, and insists upon the truly scientific character of certain systems, as the Nyāya and Vaiśeśika, which are free from religious mysticism. Notes philosophical significance of Buddhism, akin to that of Sophism. Close examination of Indian Scepticism and Realism.] **Eduard von Hartmann.** 'Abstammungslehre. Selektionstheorie und Wege der Artentstehung.' [Adaptation the presupposition of selection, not its product. The pretension of the theory of selection to explain the teleology of the organic untenable. Direct adaptation to changed external circumstances along with discontinuous change sufficient to explain all living and dead organisms without any selection. The law of correlation the higher law embracing the laws of fluctuating variability, direct adaptation and discontinuous change.] Besprechungen.

Philosophisches Jahrbuch. Band xviii., Heft 1. **Dyroff.** 'Das Ich und der Wille.' [This paper contains a review of the various theories, beginning with Aristotle and ending with Wundt, concerning the relation of the Will to the Human Ego and to the same as known by self-consciousness. The author maintains that all the modern Will-Theories have this in common, that they can give no adequate account of self-consciousness: for this implies the difference between the Ego as subject and the Ego as object, and the relation between the two; Will has nothing to do with either.] **Scherer.** 'Sittlichkeit und Recht; Naturrecht und richtiges Recht.' [In this last article the writer takes part with Stammler against Bergbohm, in so far as the latter attacks the idea of Natural Law; but he thinks that Stammler's theory of Law, though clever and original, is unsound and open to unanswerable objections.] **Czaja.** 'Welche Bedeutung hat bei Aristoteles die sinnliche Wahrnehmung? etc.' [The author in conclusion points out that Aristotle, though strongly opposed to the extreme Idealist tendencies of Plato, was by no means the materialist some would make of him. In his works there are many evident proofs that he considers intellect as something of a nature quite different from sense; and that though it does not act without imagination, the latter is not its organ, for it has

none.] **Neher.** 'Patricius Benedikt Zimmer.' [A short account of the philosophy of Zimmer, a Catholic Idealist, the well-known Bishop Sailer's friend. For him, philosophy is 'the recognising of God in all things and each in God, and also of the fact that God alone is truly in all things and that nothing is true save in God'.] **Gutberlet.** 'Der erste Kongress für experimentelle Psychologie.' [A summary of the papers read at the first Congress of Experimental Psychology in Giessen, from 18th April to 21st April, 1904; abridged from the official report, by Schumann.]

Rivista Filosofica. Anno vii., vol. viii., Fasc. i., January-February, 1905. **B. Varisco.** 'La filosofia della contingenza.' [A criticism on recent defenders of indeterminism, chiefly Bergson. Logical necessity obtains only between our concepts. But experience may give us a conviction that phenomena are determined, amounting to complete certainty. From the standpoint of inductive science the doctrine of the conservation of energy as applied to our volitions through their connexion with nervous states still remains unshaken. But this admission leaves untouched whatever arguments in favour of freewill any individual may derive from the facts of his inner consciousness, moral or religious.] **E. Morselli.** 'Società e ideale etico (continuazione e fine).' [Wundt, like Spencer, has unconsciously constructed a philosophy of social progress under the influence of a particular ethical theory. He has not proved scientifically that there is a general will; and if there were one its superiority over the partial will would remain merely an ethical postulate.] **A. Pagano.** 'Delle vicende storiche del concetto del diritto naturale.' [The history of 'Natural Law' shows that it is an elastic conception capable of covering a socialism in which individualism shall find itself fulfilled.] **R. Montuori.** 'Il Principe del Machiavelli e la politica di Hobbes.' [The pessimism of Hobbes is borrowed from Machiavelli.] Rassegna Bibliografica, etc Anno vii., vol. viii., Fasc. ii., March-April. **A. Piazzi.** 'I problemi fondamentali della didattica specialmente riguardo alla scuola media.' [Criticisms and suggestions on secondary education in Italy.] **G. Calo.** 'Intorno al progresso odierno del Prammatismo e ad una nuova forma di esso.' [This 'new form of pragmatism' is represented by Marchesini, who, according to his critic, regards moral obligation as a salutary fiction to be accepted as if it were an objective truth. But this, says Calò, would be impossible when its unreality was known.] **G. Della Valle.** 'La teoria dell' anima-armonia di Aristosseno e l'epifenomenismo contemperaneo.' [Contends that the comparison of the soul to a musical harmony is not of Pythagorean origin; and asserts rather than proves that this view, in the form given to it by Aristoxenus, is identical with modern automatism.] Rassegna Bibliografica, etc. (includes a review of Mr. Bertrand Russell's *Leibniz*).

VIII.—NOTES.

LEWIS CARROLL'S LOGICAL PARADOX.

I should like to be allowed to make a few remarks on the Note under the above heading signed "W.," in the April number of MIND.

"W." observes that my attempt to solve the question suggested by Lewis Carroll "fails in all points". But his own statement of the 'direct argument' and the result to which it leads are practically the same as mine. In support of this assertion I would recall what is said in my Note. I there point out that the two premisses which have to be taken account of are:—

(1) If either two of the three (Allen, Brown, Carr) are out the other must be in.

(From which it follows that:—

If Allen is out and Brown is out, Carr is in, etc.)

(2) If Allen is out Brown is out.

And that from (1) and (2) it follows that:—

If Allen is out, Carr is in
= If Carr is out, Allen is in } [= Carr or Allen must be in].

"W." gives as the premisses of the argument:—

(i.) Either Allen is in, or Brown is in, or Carr is in.

(ii.) If Allen is out, Brown is out,
= If Brown is in, Allen is in, etc.

Whence, obviously (he says):—

Either Allen is in or Carr is in, etc.

It hardly needs pointing out that the two 'treatments' are similar, and that each reaches the result:—

Carr is in or Allen is in (3).

The *denial* of this reasoned result (*i.e.*, the assertion that *Allen is out and Carr is out*) leads of course to a *reductio ad absurdum*.

Let us now assume that the denial of (3) is true—that:—

Allen is out and Carr is out (4).

Then—since either *Brown is out*, or *Brown is in*—we get:—

(*a*) Allen is out and Carr is out and Brown is out.

(*b*) Allen is out and Carr is out and Brown is in.

(*a*) Contradicts premiss (1), according to which Allen or Brown or Carr is in.

(*b*) Contradicts premiss (2), according to which Brown is out or Allen is in.

This appears to me to be the most natural and satisfactory *reductio ad absurdum*. It is of a familiar kind, and being a double reduction, corresponds to the double hypothesis from which we start. Thus:—

Allen is in or Brown is in or Carr is in . . . (by (1)).

(*b*) { But Allen is out and Carr is out . . . (by (4))
{ ∴ Brown is in.

But by (2) If Allen is out, Brown is *out*.

Again :—

Carr is out and Allen is out . . . (by (4)).
But if Allen is out Brown is out . . . (by (2)).
(*a*) ∴ Carr is out and Allen is out and Brown is out.
But by (1) If Carr is out and Allen is out, Brown is *in*.

There is no disagreement, I think, between the critics of Uncle Joe (including "W."), either as to the fallacious nature of his *reductio ad absurdum*, or as to the true substitute (*Carr is in or Allen is in*) for the erroneous *Carr is in*, the denial of which leads, in Uncle Joe's hands, to his *ad absurdum* proof.

"W." appears to hold that the mistake in Uncle Joe's *reductio* is due to his taking *Carr is out* as common antecedent. I, also, have demurred to this. But "W.," while refusing (p. 293) to accept

If Carr is out

as common antecedent, or as antecedent to

If Allen is out Brown is in,

at the same time blames in unmeasured terms my objection to accept

If Carr is out

as antecedent to

If Allen is out Brown is out.

If, however, there is, as "W." affirms, a "familiar and legitimate" sense in which

Carr is out

is antecedent to this latter consequent, what is to prevent its being antecedent in the same "familiar" sense to

If Allen is out Brown is in,

and so being, as Uncle Joe maintains, the common antecedent?

Carr is out

may, I suppose, be quite an admissible antecedent in both cases, if *antecedent* is understood in "W."s "familiar" sense, but not if antecedent and consequent are understood to be related as inferend and inference in the ordinary Formal Logic sense of *inferend* and *inference*. On this latter view

Carr is out

is antecedent in

If Carr is out, then if Allen is out Brown is *in*,

to the extent, and in the sense, allowed by "W." at the foot of page 292 (with which I agree), but is certainly *not* antecedent to

If Allen is out Brown is out.

So that, as far as I understand "W."s argument here, we are (thanks to a merely verbal ambiguity) reduced to the dilemma that either

Carr is out

is common antecedent, and Uncle Joe is right, or

Carr is out

is, as I have contended, *not* antecedent to

If Allen is out, Brown is out.

This is of course not the time to argue the whole question of the interpretation of Hypotheticals and Conditionals,[1] but as "W." remarks that in this connexion I have made "again a serious mistake of principle, accompanied by an impossible example," I must add a few words on this point.

[1] I may observe that "W." does not appear to have considered either the interpretation which I put forward or its bearing on the question under discussion, which, however, it was the express purpose of my Note to expound.

What "W." is finding fault with here is my contention that an argument, the expression of which falls into the form:—

If A, then C
If A, then not-C [1]

necessarily proves the falsity of the expressed common antecedent only if that expressed antecedent is not elliptical, and gives the whole ground for each of the contradictory conclusions C and not-C.

I think that Hypothetical and Conditional, as well as Categorical, arguments, may be elliptical, and that in such elliptical cases the antecedent as stated may be not disproved, although the consequents as stated may be contradictory. Such cases are, I believe, not only possible, but common, and a form into which confusions and misunderstandings often fall (including the 'paralogism' of Uncle Joe). The 'impossible' example about the dog in my January Note was suggested by a remembered experience, but perhaps the following is more appropriate:—

If this is inference, the conclusion is contained in the premisses;
If this is inference, the conclusion goes beyond the premisses.

As far as the actual expression goes, the consequents here disprove the common antecedent—still this is not, I think, a genuine *reductio ad absurdum*.

E. E. C. Jones.

THE EXISTENTIAL IMPORT OF PROPOSITIONS.

My reply to Mr. Russell in the last number of Mind will also, on all essential points, serve as an answer to Mr. Shearman's note in the same number. Mr. Shearman, like most symbolists, maintains that "it is not self-contradictory to say $(0{-\!<}A)$, whether A stands for 'existent' or for any other term". Now, consider the formula $AB{-\!<}A$, which I believe all Boolians accept as valid for all values of A and B. It asserts that the class AB is always wholly contained in the class A. Let the classes A and B be both real but mutually exclusive. By our data, the class A, consisting of the individuals A_1, A_2, etc., really exists; so does the class B consisting of the individuals B_1, B_2, etc.; but the class AB, consisting of the individuals $(AB)_1$, $(AB)_2$, etc., supposed to be common to A and B, has no real existence; it is an unreal class, so that the unreal individuals composing it may be denoted by 0_1, 0_2, etc. Can we consistently assert, as the formula $AB{-\!<}A$ (or its equivalent in this case $0{-\!<}A$) asserts, that the *unreal* (and therefore non-existent) individuals 0_1, 0_2, etc., are contained in the class of *real* individuals A_1, A_2, etc.? It is hardly an answer to say that the symbol 0, as logicians usually define it, does not denote an unreal class made up of unreal members, as I define it, but a null or empty class containing no members; for is not a null class containing no members logically equivalent to an unreal class made up of unreal members? As I said in my reply to Mr. Russell, the crucial point which here separates me, I believe, from all other symbolists is that I regard the class 0, whether empty or made up of unrealities, as necessarily *excluded from every real class;* whereas they all regard it as *contained in every class whether real or not*.

Mr. Shearman says that in the note which he criticises I confuse the

[1] We cannot, of course, question such a symbolic statement unless we know the circumstances of the concrete case which it represents—here we do know them, and here the symbolic statement is misleading.

term 'existent' with the existence of things denoted by the term, and the term 0 with the non-existence of things denoted by it. A little further on, he says—and if he will read §§ 11, 12 of my article in the number of MIND containing his note, he will find that in this I quite agree with him—that "the presence of this term 'existent' does not imply the existence of things denoted by the term". Now, is it not curious that the confusion of ideas which Mr. Shearman imagines he finds in my note in regard to the words 'existent' and 'non-existent' is precisely the defect which I think I find in his note and in the reasoning of other symbolists? How is this? The explanation from my point of view is, that the confusion is solely on their side, and that it arises from the fact that they (like myself formerly) make no *symbolic* distinction between *realities* and *unrealities*, which I now respectively represent by the symbols e and 0. With them, 'existence' means simply existence in the Universe of Discourse, whether the individuals composing that universe be real or unreal; and the symbol 0, as they understand it, merely denotes *absence* from that universe. With me, the symbol e denotes *realities*, and 0 denotes *unrealities*, both of which may, or may not, co-exist in the Universe of Discourse or Symbolic Universe, S. Absence from the Universe of Discourse I hold to be illogical. Once anything (real or unreal) is spoken of, it must, from that fact alone, belong to the Symbolic Universe S, though not necessarily to the universe of realities e.

I cannot see the relevancy of Mr. Shearman's argument commencing with the statement that "with two terms 0 and 'existent' the universe of discourse is necessarily divided into four compartments". Even if the classes corresponding to these four compartments were all mutually exclusive, as he seems erroneously to assume, his criticism in this paragraph would not touch the principle of my note. The argument of my note, and my argument still, is that, since the statement ($XA = X$), or its equivalent ($X \prec A$), is understood by Boolian logicians to assert that "Every individual of the class X is also an individual of the class A," consistency requires that the statement ($0e = 0$), or its equivalent ($0 \prec e$), shall similarly assert that "Every individual of the class 0 is also an individual of the class e"; and that this being a self-contradiction, the formula ($0A = 0$) or ($0 \prec A$) fails when $A = e$ ('existent').

The following is a point of some importance. Let A and B be any two classes; let S be an individual taken at random from our universe of discourse; and let (AB), within brackets, denote the class of individuals common to A and B. So long as A and B are real and not mutually exclusive, we have

$$S^A S^B = S^{(AB)} = \theta.$$

But when A and B are real but *mutually exclusive*, the class (AB) is *unreal*, so that in this case we have

$$S^A S^B = \eta, \text{ but } S^{(AB)} = S^0 = \theta.$$

Thus, $S^A S^B$ and $S^{(AB)}$ are equivalent when A and B are real and not mutually exclusive; but they are *not* equivalent when A and B are real and mutually exclusive.

In my *general* logic, or logic of *statements*, the implication (AB : A)—which is *not* (as some have supposed) equivalent to the Boolian (AB—≺A)—is always true; for by definition we get

$$AB : A = (AB \cdot A')\eta = (AA' \cdot B)\eta = (\eta B)\eta = \epsilon.$$

Similarly may be proved the truth of my formula ($\eta : A$), which is *not* equivalent to the Boolian (0≺A). A little consideration will show that though the implication ($\eta : A$) is valid, the implication ($Q^\eta : Q^A$) is not.

The latter fails both in the case $Q^{\eta}\ A^{\epsilon}$ and in the case $Q^{\eta}\ A^{\theta}$. In the first case, putting $Q = \eta$ and $A = \epsilon$, we get

$$Q^{\eta} : Q^{A} = \eta^{\eta} : \eta^{\epsilon} = \epsilon : \eta = (\epsilon\eta')^{\eta} = (\epsilon\epsilon)^{\eta} = \eta\ ;$$

and in the second case, putting $Q = \eta$, $A = \theta$, we get

$$Q^{\eta} : Q^{A} = \eta^{\eta} : \eta^{\theta} = \epsilon : \eta = \eta, \text{ as before.}$$

The difference between my symbol of implication (:) and the usual symbol of class inclusion ($\prec$) will appear from the fact that the statements $\eta : \epsilon$ and $\eta : \theta$ are both true, while the statements $\eta \prec \epsilon$ and $\eta \prec \theta$ are both false. For example, $\eta \prec \epsilon$ asserts that every *impossibility* is a *certainty*, which is absurd; whereas $\eta : \epsilon$ only asserts $(\eta\epsilon')^{\eta}$, which is self-evident.

Hugh MacColl.

NOTE BY PROFESSOR TAUSCH.

Prof. Edwin Tausch (Ohio University, Athens, Ohio, U.S.A.) will be greatly obliged if readers of Mind will send him information about those periods in their past lives when they were perplexed over the purpose and meaning of their own existence, and the world about them; likewise about the times and occasions, if any, in which an old view of their relation to God and their fellow-men was confirmed, or a new prospect opened before their inner vision.

Correspondents are requested to add to their narrative their age at the time of the experience, to state the circumstances that in their opinion brought on the experience, and to describe the peculiar feelings that accompanied it. Any reference to similar cases reported in literature will be highly appreciated. No name will be used in any publication that may result from the investigation.

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The following have joined the Mind Association since the printing of the April number:—

Coddington (F. J. O.), The University, Sheffield.
Foston (Dr. H. M.), Hathern, near Loughborough.
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